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EDUCATION NUMBER.

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THE MEDICAL JOURNAL OF AUSTRALIA.

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EDUCATION NUMBER.

THE MEDICAL SCHOOL OF THE UNIVERSITY OF SYDNEY.

(Prepared by special request by the Acting Dean of the Faculty.)

A period of approximately one generation has elapsed since the establishment of the Medical School of the University of Sydney.

As a teaching school it came into existence with the appointment of Dr. Anderson Stuart as Professor of Anatomy and Physiology thirty-seven years ago.

The early organization of the school was mainly his work and ever since he has presided over its control and development as Dean of the Faculty of Medicine. Thus the recent removal by death of Sir Thomas Anderson Stuart marks the end of an epoch of remarkable growth and progress due in great measure to his indomitable energy, his assiduous devotion to its interests, his large-scale ideas and his remarkable foresight.

It was natural that in its earlier phases of evolution the Medical School of the University of Sydney should have been organized largely on the lines of the Medical School of the University of Edinburgh, of which Professor Anderson Stuart was a most distinguished alumnus, and in which he began his career as a teacher. But Anderson Stuart was no mere copyist. He welcomed sound ideas from every source, and before long the Sydney School of Medicine began to exhibit a character of its own in adaptation to its local circumstances, as well as from the introduction of features and methods not represented in the earlier tradition.

From the first, indeed, certain differences were present. The curriculum for the degrees in medicine and surgery nominally extended throughout a period of five years as against the four years which at that time constituted the normal medical course in the United Kingdom. But since the first year of the curriculum was identical with the first year of the curriculum in arts, the medical course proper was actually of only four years' duration.

It may be of some interest here to recall some features of the earliest Sydney Medical curriculum. This had been drawn up before the advent of Professor Anderson Stuart and appears in the University Calendar for 1883-4. Under this curriculum only two "professional" examinations were to be held, one at the close of the "third" (*i.e.*, the second genuinely medical) year and a final examination at the end of the course. Under this arrangement chemistry, botany and zoology were not disposed of until the end of the second (nominally third) medical year. Physiology and pathology were among the subjects of the final examination. The provisions of this curriculum, however, are of merely historical interest. It never became effective, as the new professor secured its early modification on the lines of the then existing Edinburgh course with its three professional examinations, a first including the preliminary sciences, a second including anatomy, physiology, *materia medica* and pathology, and a final including all the practical professional subjects.

It may also be noted that the early by-laws provided for four degrees, M.B. and Ch.B. as first degrees and M.D. and Ch.M. as advanced degrees. This provision also was never operative, the Edinburgh model being introduced according to which the Ch.M. degree was substituted for the Ch.B. as a first degree and the M.D. degree retained in the more ancient traditional sense as the higher degree for all branches of medical science. Edinburgh has since then altered its practice in the other direction.

Even as first modified under the influence of Professor Anderson Stuart, the earliest effective curriculum still retained the provision for a nominal five years' training, of which the first year was identical with the first year in arts.

This system gave place in 1889 to one which provided for a genuine five years' curriculum of purely scientific and professional character, this change antedating by several years the introduction of the compulsory five years' medical curriculum by the General Medical Council of the United Kingdom. With this change the previously compulsory first year in arts became alternative to a medical entrance examination of considerably higher standard than the ordinary matriculation examination. The year thus gained for the medical curriculum proper was largely devoted to a more thorough training in the fundamental branches of natural science, physics, chemistry and biology. The teaching of these subjects had till then been carried on alongside of that of human anatomy, physiology, surgery, *materia medica* and clinical work in the hospital, and without any such scheme of co-operation and correlation between the purely scientific and the more technical professional subjects as is being advocated at the present time.

At several times during the intervening period of 30 years or so, alterations of more or less drastic character have been introduced. On the whole, these alterations have represented improvements on the then existing system; some of them were dictated by the necessity for introducing new and further specialized teaching, as in the case of the subject of bacteriology; or by recognized changes in the relative importance of subjects already taught; or by the introduction of new and improved methods of teaching. Conspicuous changes in this latter direction were effected by the introduction of a much wider range of practical and laboratory instruction accompanied by a very great reduction in the number of systematic lectures. In the subjects of anatomy and physiology, for example, the systematic lectures were

cut down by one half, whilst the practical laboratory work in physiology was largely expanded.

Nevertheless, in spite of many changes in detail, the general principles underlying the curriculum in medicine during a lengthy period have not until quite recently been seriously called in question.

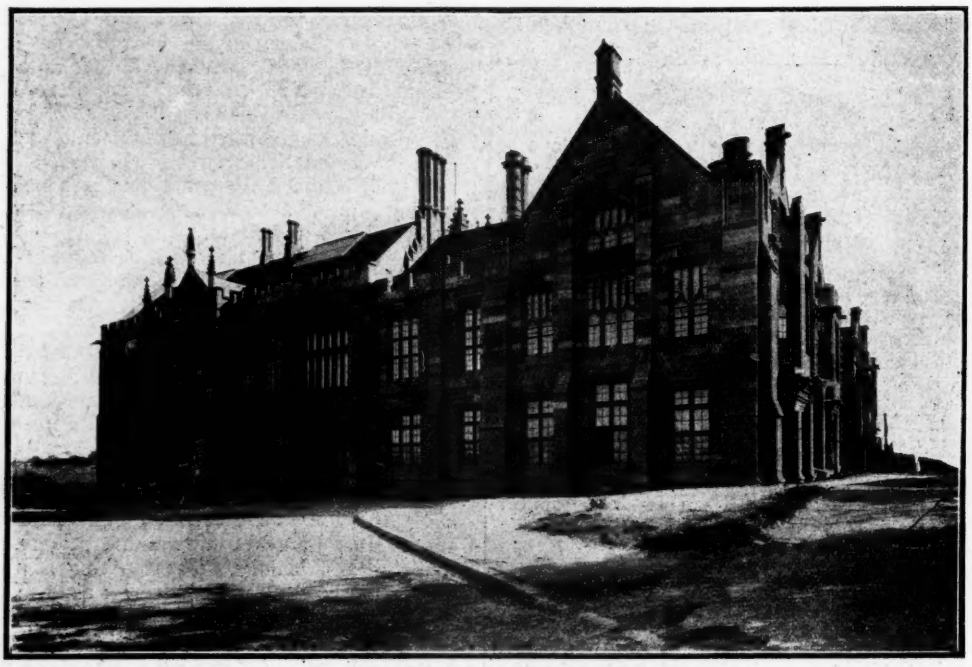
These principles include the following:—

(*a*) The requirement of proof of a standard of literary and general educational qualifications sufficient to warrant the bestowal of university degrees in medicine and surgery. It has constantly been maintained that such degrees ought to imply something more than the possession of mere diplomas of proficiency in technical training. To this principle the University of Sydney has thus far tenaciously adhered.

(*b*) The requirement of a preliminary period of training in the fundamental principles of pure natural science without necessary reference to their special application to the technique of medical and surgical procedure, and prior even to an acquaintance with the manifestations of these principles in the structure and working of the human body in health and disease. This requirement has been so far met, or at least attempted, by the devotion of the first year to the fundamental sciences of physics, chemistry and biology. Nor should this be taken to imply that the study of physics, chemistry and biology ends with the completion of this year. The study of anatomy, physiology, pathology and pharmacology are on the one hand the more advanced application of chemistry, physics and biology, whilst on the other hand they are, or ought to be, so studied as to provide a sound basis for the technical application of just the same principles in the diagnosis, and in the prevention and treatment, of disease.

(*c*) Therefore it is that the third period of preparation for the practical training of the future practitioner of medicine has been allocated to the acquisition of a thorough familiarity with the structure and working of the human body both in the state of health and as altered by disease and by the influence of environment, including the operation of drugs and other agents which affect organic structure and process.

(*d*) The fourth and final period in the training of the medical practitioner, according to the system embodied in the medical curriculum hitherto in vogue in most medical schools of repute, is that in which the medical student is brought into first hand contact with the clinical phenomena which are the expression and manifestation of those morbid processes and changes whose precise nature he has been taught to understand and appreciate.



The Medical School of the University of Sydney.
View from Victoria Park.

The ideal of this period is complete absorption in clinical study assisted by such systematic and classificatory instruction as may facilitate diagnosis and interpretation of clinical facts and indicate the direction and methods of treatment. This will, of course, include all forms of manipulative and operative procedures, general and special. It also implies more or less specialized teaching in different sub-departments of medicine and surgery. And it will include all necessary instruction in forensic and in preventive medicine.

The validity of the logical order of the requirements corresponding to the four periods of training set forth above will hardly be challenged. But there

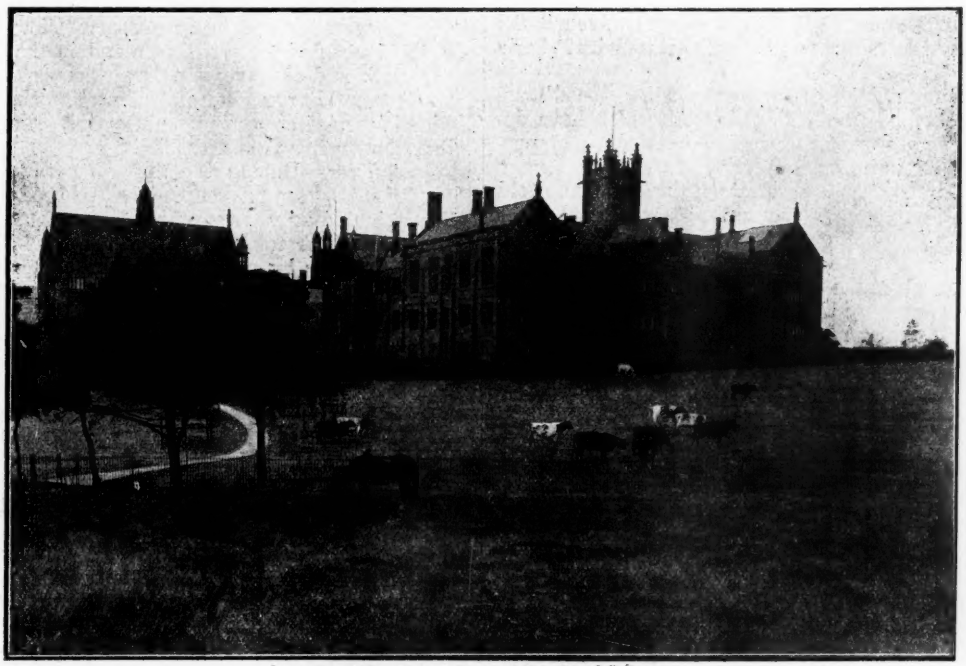
is room for very wide divergence of opinion on the question of the degree of independence which it is advisable to preserve between the various phases of scientific and professional education for the degrees.

How far can the period of preliminary or pre-matriculation general education be made to include subjects at present reserved for the second period, consisting of the present first year of the post-matriculation curriculum? How far, if at all, may the subjects of the third period "(*c*)" be arranged to begin earlier and run more or less concurrently with those of the second "(*b*)," *i.e.*, the present first year work? And above all, how far, if at all, should subjects at present restricted to the fourth "(*d*)," more definitely professional, period be begun and continued concurrently with the study of the scientific subjects which serve as its indispensable basis?

Hitherto the logical order of progression from training in general fundamental principles of physical and biological science, through a study of the more special applications of these principles in human anatomy, physiology and pathology, up to the study of the practical science and art of medicine and surgery, has been followed in the practical arrangement of the studies of the medical student. There has been something of a "clean cut" between the various periods specified. The completion of each period has culminated in an examination which has been taken to testify to the possession of scientific attainments necessary to the adequate understanding of the problems studied in the next succeeding period.

The system thus organized arose historically from a reaction against the somewhat anarchical conditions which prevailed under the system which preceded it. Senior practitioners will remember that there was no prescribed order of studies, although, no doubt, there was in practice some measure of uniformity. But there was nothing to prevent any subject in the curriculum being taken at any time and in any order. It was quite common to find students who had completed their attendance on the whole of the required subjects of the curriculum before they had passed any examination at all. Indeed, at a still earlier period the only examination was one held at the end of the course in all the subjects.

Further, the reaction against a chaotic arrangement of the studies in general was accompanied by a reaction against premature attendance on, and engrossment in, clinical work. This was a relic from the older days of medical apprenticeship. That such a system was compatible with medical training of a high order, the lives of many great men afford ample testimony. But there were enormous disadvantages, especially for the less gifted and the rank and file generally. Absorption in practical empirical details of clinical work and of hospital administration, as well as in the merely human interests of the "cases," at a time when the student is incapable of understanding and appreciating the phenomena either of health or disease by lack of physical and biological knowledge, was certainly gravely prejudicial to real progress. The average student was induced to think of himself as a doctor at a time when his entire energies should have been concentrated on the facts and phenomena of elementary science. The value of the comparatively slight and wholly empirical clinical information thus gained was entirely incommensurate with the value of the time spent in acquiring it and its vivid human interest was a positive menace from its undoubted tendency to attract the student



The Medical School of the University of Sydney.
View from City Road.

away from the study of basic principles and phenomena.

These are some of the considerations which weighed with medical educationalists when they reorganized the medical curriculum a generation ago by introducing the principle of a graduated progression from stage to stage, sanctioned by examination certificates of competence for each successive period.

It was with open eyes that they accepted the corollary of a comparatively late entry upon actual clinical work, believing, as they did, that really effective clinical experience was only possible to those who had already attained an understanding of the structure and working of the normal human body.

There was no blindness to the fact that the clinical period remaining was all too short. But there was a justifiable scepticism as to the value of precocious clinical attendance before the foundations of effective clinical experience had been well and truly laid. Three months added on at the end of the available clinical curriculum might well be worth twelve months gained by entering wards with insufficient basic training.

This is not the place to carry further the discussion of the validity of the principles which have determined the form of the medical curriculum at present exemplified in the University of Sydney. It may suffice to say, firstly, that although there are manifold variations among the curricula of medical schools within the Empire, there is, for the most part, and up till now, a general resemblance of type and of underlying principle among them; secondly, there is now a growing tendency to call in question the wisdom of those provisions of our curricula which, in recognizing the principle of gradation from stage to stage, introduce (in varying degree in different schools) the expedient of the "clean cut" between successive stages of training. In place of what may be called a "horizontal" cleavage into years or curriculum periods, proposals are now being discussed for what may be called "vertical" cleavage throughout the entire curriculum, into certain subject areas within each of which something of an independent scheme of graduated teaching may be worked out. And with this is associated a tendency to revert to the earlier practice of more precocious clinical teaching.

There is much to be said on both sides of the question. The time is undoubtedly ripe for curriculum revision. But it must never be forgotten that the defects of the actually existing system are certain to be far more obvious to the critic than those which implicitly lurk in the system devised to supersede it. It is not difficult to point to existing weaknesses and it is relatively easy to introduce provisions which will obviate just these particular defects. But it is not so easy to be certain that in radically altering a complex system, new weaknesses or defects incidental to the new reforms may not be inescapably involved.

Some account may now be given of the existing provisions governing degrees in medicine and surgery within the University of Sydney.

Candidates for the Degree of M.B. (and Ch.M.).

Admission as a student of medicine requires evidence of adequate general education. The minimum qualification in this direction is the matriculation examination for the Faculty of Medicine, which may be passed either as a University examination or as a Leaving Certificate Examination of the Department of Education.

Candidates from other approved universities may be admitted *ad eundem statum* on the production of evidence satisfactory to the faculty both as to status and good conduct.

The qualifying subjects for matriculation in the Faculty of Medicine are English, Latin, mathematics, French or Greek or German, and of these subjects three must be passed at the "higher" standard.

After qualification for matriculation the student enters the Medical School at the beginning of Lent term, about the middle of March.

The instruction of the student of medicine during the first two years and for the first two terms of the third year is carried on entirely within the University in its laboratories and lecture rooms. Thereafter, in the third term of the third year and in the whole of the fourth and fifth years a large proportion of his time is spent in practical and clinical work, much of which is carried on away from the University, in hospitals, both general and special.

First Year.—During the first year the whole of the student's time is occupied in the study of pure science, including physics, chemistry, botany and zoology. All these subjects are taught partly by lecture and partly by practical work in the laboratory. In addition there is during the last term of this year a course of instruction introductory to the study of human anatomy.

The examination in the work of this year is carried out partly during the course of the year and partly at the end of it.

Second Year.—During the second year the student devotes the whole of his attention to the study of human anatomy, both naked eye and microscopical, and to physiology. Besides the lectures in these departments there is a large amount of practical work. Only one hour a day is occupied by lecture work during two terms and two hours daily during another term. As even the lectures largely partake of the nature of a demonstration, it is evident that merely theoretical instruction is reduced to a minimum. All other class work is either practical and laboratory work or tutorial work, also of a practical character.

The second year examination is held at the end of the second term of this year and is largely of the nature of a progress examination in anatomy and physiology. The definitive examination in these subjects does not take place until the corresponding period of the following year.

The practical work of the year includes dissection of the human body during all three terms, practical histology or microscopical anatomy during one term, experimental physiology during one term and physiological chemistry during one term.

Third Year.—In the third year the student continues to pursue his studies in anatomy and physiology throughout the first two terms. In addition, he takes up the study of pharmacology in continuance

of his training in experimental physiology. The practical work of this period consists of human dissection and of practical pharmacological laboratory work.

At the end of the second term of the third year the third medical examination, in anatomy, physiology and pharmacology, is held and the passing of this examination marks the transition in the curriculum from the scientific study of normal structure and process to the similar study of morbid structure and process as exhibited in the pathological laboratory, the *post mortem* room, the out-patient department, the wards and the operating theatres of the hospitals.

During the third term of this year the student attends lectures on surgery and at the same time he attends surgical clinics and operations and tutorial classes in elementary surgical procedures.

At the University he also enters upon his studies, both theoretical and practical, in pathology and bacteriology and also in *materia medica,* therapeutics and pharmacy.

Thus already during the course of the third year the arrangements for the training of the student of medicine may be viewed as having branched in two directions. One of these is still that of more or less systematic training, both theoretical and practical, in various branches of medical science; whilst the other direction is that of direct clinical observation and instruction in clinical methods for the diagnosis and treatment of disease and injuries.

This duality of aspect of training has demanded the organisation and equipment of our hospitals for effective clinical teaching.

For a lengthy period the University of Sydney, owing to its peculiar local, historical and governing relationship with the Royal Prince Alfred Hospital, looked solely to this institution for regular and systematic clinical instruction. There was in fact only one recognized clinical school, because only in the Royal Prince Alfred Hospital were complete arrangements made for this work, whatever occasional and partial use was in fact made of the resources of that other great institution, the Sydney Hospital.

As the University Medical School grew in numbers and as the staff and authorities of the Sydney Hospital gradually became alive to the importance of clinical teaching, both for the status and the actual efficiency of the hospital, arrangements were brought about by which the teaching resources of the Sydney Hospital were mobilized and organized as a clinical school of the University, co-ordinate with the Royal Prince Alfred Hospital.

It has thus come about that the students of medicine on reaching the period of their clinical training are able to elect one of these two large hospitals as the sphere of their clinical work.

It will therefore be convenient in this résumé of the medical curriculum to allow the clinical portion of the work of the later years to be summarized and set forth in separate brief accounts of the two hospital clinical schools (*vide infra*).

The systematic, non-clinical work of the later years still carried on within the precincts of the University itself may be summarized as follows:—

Fourth Year.—During the fourth year the pathological instruction already begun in the latter part of the third year is continued during the first two terms, largely by laboratory work both in morbid histology, hæmatology and bacteriology. Facilities for *post mortem* room teaching are provided in both hospitals (a certificate is required of attendance on at least 25 *post mortem* examinations). The Professor of Pathology is Honorary Pathologist at the Royal Prince Alfred Hospital and thus material illustrating naked-eye morbid anatomy is secured for systematic demonstration by the Professor at the University.

The systematic lectures in surgery, begun in the last term of the third year, are continued throughout the first term of the fourth and the practical class of surgical anatomy and operative surgery is also conducted during the earlier period of the year.

At the end of the second term of this year the fourth examination is held. It includes the subjects of pathology, operative surgery and surgical anatomy and *materia medica* and therapeutics.

During the third term of the fourth year systematic lectures in medicine and tutorial class work in methods of medical diagnosis and treatment are carried on. Lectures in obstetrics also occupy this period of the year. Opportunities for practical work in obstetrics are provided at the Royal Hospital for Women and also at the Women's Hospital to successive groups of students, who are attached for this purpose to these hospitals for the period necessary to meet the requirements of the certificate of attendance on at least twelve cases of child-birth. During these periods they reside in or near the hospitals and work under the direction of their staffs.

Fifth Year.—During the fifth year the students are mainly occupied with clinical work at the general hospital to which they are attached. During the last term of the academic year they are entirely free from attendance on lectures at the University, although they still attend clinical lectures in the hospital. During the first term of the year they continue to attend the course in systematic medicine begun in the last term of the fourth year. They also attend a course of lectures on gynæcology, as well as shorter courses on medical jurisprudence (20) and public health (30). During the period which includes the long vacation intervening between the fourth and fifth academic years and the earlier part of the fifth academic year, they attend, in addition to clinical hospital instruction, short courses of lectures in psychological medicine, ophthalmology, diseases of children, of ear, nose and throat and of the skin. These are all associated with clinical demonstrations at a hospital. Demonstrations in infectious diseases are also given at the infectious diseases hospital.

Since the final examination does not take place until the month of March following the expiry of the fifth academic year, there remain three final months exclusively devoted to clinical observation and further training in the wards of the hospitals.

Certificates of proficiency in (*a*) the administration of anæsthetics at a recognized hospital and (*b*) in vaccination are required before admission to the final examination.

Cost of Graduation in Medicine and Surgery.

The fee for the Medical Matriculation Examination at the University is two pounds.

The total minimum fees payable for education and graduation in medicine amount to £160 inclusive of fees for hospital attendance (£10 10s.) and of fee for practical midwifery (£5), but exclusive of annual payment of one pound for membership of the University Union.

The payment of fees is spread over the five years' course as follows: Matriculation fee £2, first year £25 4s., second year £28 7s., third year £28 7s., fourth year £25 4s., fifth year £25 4s., examination fees for M.B. £10, for Ch.M. £10. It is not obligatory to take the Ch.M., but the same examinations qualify for both degrees.

In addition to the fees specified above certain other items of expenditure are necessarily involved. These include, of course, books and instruments and, if at all possible, osteological specimens, as well as microscopical slides and cabinets. A good microscope is an essential sooner or later, and should be procured at the outset, if possible. If it is not, then it will be necessary for the student to pay a fee of one pound in each of several practical classes for the use of a University microscope. If the student elects to purchase his own microscope he may do so any dealer's, but the instrument must conform to certain requirements specified by the University. It will be wise to obtain expert advice on the purchase of this important and somewhat expensive accessory. It will probably require an expediture of somewhere between £15 and £25. It should be regarded as an indispensable part of the equipment of every medical student and practitioner.

There will also be an annual fee of £1 required for membership of the University Union, which is obligatory on all students.

When all the items above specified are included, the cost of the medical course cannot be reckoned as under £200 and may easily be somewhat more.

Honours.

There are no special honours examinations. Honours are awarded at graduation on a basis of proficiency in the professional examinations throughout the course. Excellence in individual examinations is indicated by a classification of results above the pass standard under the following categories: "with credit," "with distinction, "with high distinction."

Post-Graduate Arrangements.

Graduation in medicine in the University of Sydney entitles the holder of the degree to registration as a legal medical practitioner in all Australian States and also in the United Kingdom on a special register of the General Medical Council, which also gives the legal title to practise. The maintenance of this status before the General Medical Council of Great Britain and Ireland involves the obligation on the part of our medical schools to conform to the Council's requirements for such registration. This fact has to be borne in mind in considering proposals for radical changes in Australian University By-Laws and Regulations affecting degrees in medicine.

A very large proportion of the medical graduates of the University of Sydney have in the past secured opportunities of becoming resident medical officers in hospitals. In the earlier days practically every graduate obtained such an appointment. It cannot be anticipated that with the great growth of the School similar opportunities of ordinary resident appointments will be available in equal proportion. The question will thus arise, in view of the paramount importance of post-graduate experience of this kind, whether some other system of providing, indeed of requiring it will not have to be devised.

In 1902 Professor Anderson Stuart recorded the fact that out of the 218 graduates who had at that time graduated from the Medical School, 184 had held office as resident medical officers in some hospital. The proportion must, of course, have greatly diminished since that period.

B.Sc. Degree for Medical Undergraduates.

If the details of the curriculum for the degrees of M.B., Ch.M. be studied, it will be seen that the first three years include a somewhat comprehensive course in physical and biological science. The University degrees in medicine profess to be something more than mere diplomas of technical proficiency for practitioners of medicine.

Further, a comparison of the curriculum for first year medicine and first year of the curriculum for the degree of B.Sc. will show that first year medicine is practically identical with one of the alternative combinations of the first year in science. These years are in fact practically interchangeable. In view of this fact, and of the fact that the succeeding two years in medicine consist almost entirely of purely scientific studies, a By-law (Chap. XVIII., S. 24) provides that students of medicine who have completed the first three years of study and have passed the examinations and who have further attended certain advanced scientific instruction and passed an examination, therein, may be admitted to the degree of B.Sc

Diploma of Public Health.

A diplomas in public health of the University of Sydney is obtainable by graduates in medicine under conditions set forth as follows:—

The examination for the Diploma in Public Health consists of two parts, *viz.*, Part I., relating to the general principles of sanitary science; and Part II., relating to state medicine and to the applications of pathology and sanitary science to public health. Schedules of these subjects are prescribed from time to time by regulations made in accordance with these By-laws.

Before presenting himself for Part I. of the examination for the Diploma in Public Health a candidate must produce evidence satisfactory to the Senate:

(*i.*) That he is a qualified practitioner, registered by the New South Wales Medical Board.

(*ii.*) That a period of not less than twelve months has elapsed since he obtained registrable qualifications in medicine, surgery and midwifery; and

(*iii.*) That since obtaining registrable qualifications in medicine, surgery and midwifery—

(*a*) He has during a period of not less than six months attended special public health courses in the University of Sydney, of practical laboratory instruction in chemistry, in physiological chemistry and in bacteriology and parasitology.

(*b*) He has attended elsewhere than in the laboratory a course of practical instruction, approved by the Senate, in those diseases of animals which are transmissible to man; and

(*c*) He has attended such other courses of instruction in public health as may from time to time be prescribed by regulations made in accordance with these by-laws.

Before presenting himself for Part II. of the examination for the Diploma in Public Health a candidate must produce evidence satisfactory to the Senate, that, since obtaining registrable qualifications in medicine, surgery and midwifery—

(*a*) He has been, for a period of six months (of which at least 3 months shall be distinct and separate from the period of instruction required in sub-clause (*a*) of clause (*iii.*) of section 5), diligently engaged in acquiring a practical knowledge of the duties, routine and special, of public health administration under the supervision of a medical officer of health approved by the Senate.

(*b*) He has, for a period of not less than three months, attended the practice of a "hospital for infectious diseases," approved by the Senate, such hospital being one at which opportunities are afforded for the study of methods of administration. "Methods of administration" shall include the methods of dealing with patients at their admission and discharge, as well as in the wards, and the medical superintendence of the hospital generally; and

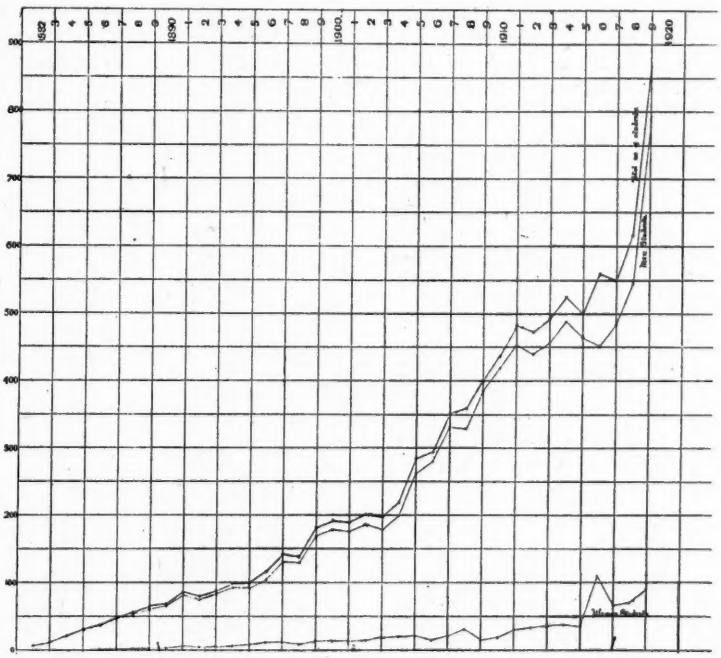
(*c*) He has attended such other courses of instruction in public health as may from time to time be prescribed by regulations made in accordance with these by-laws.

A candidate may present himself for Part I. and for Part II. of the examination separately, or for Part I. and Part II. together; but in no case may a candidate present himself for Part II. separately from Part I., unless he shall already have satisfied the examiners in Part I..

The examination for the Diploma in Public Health must extend over not less than four days.

Both Part I and Part II. of the examination must be oral and practical, as well as in writing.

One day at least during the holding of Part I. is to be devoted to practical work in a laboratory; and one day at least during the holding of Part II. is devoted to practical examination in, and reporting on, subjects which fall within the special outdoor duties of a medical officer of health.



The Degree of M.D.

Candidates for the degree of Doctor of Medicine must produce evidence that, after having obtained the degree of Bachelor of Medicine, they have spent at least two years in medical or surgical practice, or that they have been engaged in a manner approved by the Faculty for a like period in the study of any subject or subjects included in the medical curriculum of the University of Sydney.

Candidates for the degree of Doctor of Medicine are required to pass an examination conducted by means of set papers and *viva voce* interrogations in any one of the following departments of medical science and practice, *viz.*, (*i.*) medicine, (*ii.*) medical jurisprudence and public health, (*iii.*) surgery, (*iv.*) obstetrics and gynæcology; or in any one of the scientific subjects included in the medical curriculum. They are further required to present, and if called upon to defend, to the satisfaction of the examiners, a previously unpublished thesis on some subject included in the medical curriculum of the University. Three printed or type-written copies of the thesis on paper eight inches wide and ten inches deep must be transmitted to the Registrar at least two months before the date fixed for the examination.

Bronze medals may be awarded for special excellence or originality of the theses presented.

Growth of the Medical School, University of Sydney.

The attached graphs illustrate the growth in numbers of the undergraduates in medicine in the Medical School from 1882 to 1919. The total numbers of undergraduates in medicine will be seen to have grown from 6 in 1882 to 868 in 1919. The number of women medical students has grown from 1 in 1887 to 90 in 1919.

APPENDIX I.

(Prepared for the purposes of this article by Dr. H. J. Clayton, lately Medical Superintendent of the Royal Prince Alfred Hospital.)

Royal Prince Alfred Hospital Clinical School for University Students.

Medical students attend the clinical school at the Royal Prince Alfred Hospital during the Michaelmas term of the third year and during the whole of the fourth and fifth years.

During the Michaelmas term of the third year the students attend at the hospital practical lectures in clinical surgery (two lectures per week), lectures in tutorial surgery (two lectures per week), lectures from the Medical Registrar at the Hospital in history taking and the significance of signs and symptoms (one lecture per week). They also attend at operations, but they are not allotted cases in the wards and they do not accompany the honorary medical officers on their rounds, nor attend at the out-patients departments.

In the fourth and fifth years the hospital year is sub-divided into six sessions and three recesses. The sessions are each of seven weeks' duration, making a total of forty-two teaching weeks per annum, during which the Hospital is open to students for clinical work from 9 a.m. to 6 p.m. (certain lecture hours at the University are, of course, included in the daily work).

The recesses cover a period of ten weeks, during which time the hospital is closed to students other than those undergoing examination.

Hospital Sessions.

(1) January Session (seven weeks).
Commences on the second Monday in January.
Terminates on Friday, seven weeks later.
Recess (three weeks).

(2) March Session (seven weeks).
Commences on Monday, three weeks after the termination of the January session.
Terminates on Friday, seven weeks later.
No recess.

(3) May Session (seven weeks).
Commences on Monday following the termination of the March session.
Terminates on Friday, seven weeks later.
No recess.

(4) July Session (seven weeks).
Commences on Monday following the termination of the May session.
Terminates on Friday, seven weeks later.
Recess (three weeks).

(5) September Session (seven weeks).
Commences on Monday, three weeks after the termination of the July session.
Terminates on Friday, seven weeks later.
No recess.

(6) November Session (seven weeks).
Commences on Monday following the termination of the September session.
Terminates on Friday, seven weeks later.
Recess (four weeks).

In order to obtain the certificate of hospital practice necessary to qualify for admission to the final examination for the degree of Bachelor of Medicine and Master of Surgery at the University of Sydney, students are required to pass through the hospital curriculum of study and practice in the various departments, according to a scheme and time table which is detailed below.

The respective duties of all students are apportioned under this time table by the Medical Superintendent and the necessary certificates are issued to those students only who have attended at least three-fourths of the days of each session and have shown punctuality, diligence and efficiency in the performance of the duties assigned to them.

It is the duty of each clinical clerk and surgical dresser to take the histories of every patient admitted to the beds placed under his or her charge within 24 hours of admission and to make on clinical charts provided for the purpose all needful periodical reports upon the symptoms and signs, progress, treatment and results of each case. These reports are kept serially in a hospital case book. These case books are called in for examination from time to time by the Surgical and Medical Registrars of the Hospital.

The Registrars report in writing to the Medical Superintendent each month as to the work done in their departments by each clinical clerk and surgical dresser and the Medical Superintendent also obtains reports from the members of the honorary staffs concerning the character of the work done by the students under their supervision.

The scheme and time table under which the student of the fourth and fifth years work are briefly as follows:—

Students of the fourth year are arranged in equal divisions: A, B, C, D, E and F. A list of the names of the students allotted to these divisions is made out. Of the six divisions five are attached for duty to the Honorary Surgeons of the hospital (of which there are five) and the other division to the Casualty and Surgical Out-Patients Department. The six divisions change the honorary surgeon to whom they are allotted at the end of each hospital session, so that by this means each division is afforded a period of tuition in the Casualty and Out-Patients Departments and under each honorary surgeon. In addition during this year work is allotted at available times for each division in the X-ray Department, in the Venereal Diseases Department (wards and out-patients) and in the Medical Gymnastics Department.

During the January, March and May sessions the divisions are grouped in pairs and each pair is given one day per week instruction in tutorial surgery by tutors appointed by the University. Lectures to all the students of the fourth year are given twice weekly

Fourth Year.

Classes.						Allotment of Work.
A	B	C	D	E	F	Attached to Honorary Surgeon for rounds in wards, operations, history taking and dressings. Attendance in X-ray Department.
B	C	D	E	F	A	Attached to Honorary Surgeon for rounds in wards, operations, history taking and dressings. Attendance in Venereal Diseases Wards and Out-Patient Department.
C	D	E	F	A	B	Attached to Honorary Surgeon for rounds in wards, operations, history taking and dressings.
D	E	F	A	B	C	Attached to Honorary Surgeon for rounds in wards, operations, history taking and dressing. Attendance in Medical Gymnastics Department.
E	F	A	B	C	D	Attached to Honorary Surgeon for rounds in wards, operations, history taking and dressings. Attendance in Venereal Diseases Wards and Out-Patients Department.
F	A	B	C	D	E	Attendance in Casualty Room and Surgical Out-Patients Department.
January Session	March Session	May Session	July Session	September Session	November Session	*Tutorial Surgery.*—The classes are grouped in pairs and each pair is given one day per week during January, March and May sessions. *Clinical Surgery.*—Lectures are given twice a week during the Lent and Trinity terms. *Gynæcology.*—Sub-divisions of Classes F and C during September session and A and D during November session attend Gynæcological Out-Patients Department. These students form Class A of the fifth year. *Tutorial Medicine.*—During September and November session the classes are so grouped that each student receives instruction in tutorial medicine in the Out-Patients Department once weekly and once every second week in the wards.

Fifth Year.

Classes.					Allotment of Work.
A	B	C	D	E	Clinical clerkship in medical wards. Clinical clerkship in gynæcological wards. Attendance in Medical Out-Patients. Instruction in administration of anæsthetics.
B	C	D	E	A	Clinical clerkship in medical wards. Attendance in Gynæcological Out-Patients and Medical Out-Patients.
C	D	E	A	B	Clinical clerkship in medical wards and attendance in Medical Out-Patients and Ear, Nose and Throat Out-Patients.
D	E	A	B	C	Clinical clerkship in medical wards and ophthalmic wards. Attendance in Medical Out-Patients.
E	A	B	C	D	Clinical clerkship in medical and ear, nose and throat wards. Attendance in Ophthalmic and Dermatological Out-Patients.
January Session	March Session	May Session	July Session	September Session	*N.B.*—Class A does not attend Gynæcological Out-Patients, having done so during the last two sessions of the fourth year. *Clinical Medicine.*—Lectures are delivered twice weekly during the Lent, Trinity and Michaelmas terms. *Tutorial Medicine.*—The following classes receive instruction: B, C and E during January session; A, C, D and E during March session; A, B and D during May session. *Midwifery Practice.*—This is carried out at the maternity hospitals. *Demonstrations in Infectious Diseases.*—These are given at the Coast Hospital.

during the Lent and Trinity terms in clinical surgery by lecturers appointed by the University. During the September and November sessions certain sections of the divisions attend the Gynæcological Out-Patients Department and in the same sessions the divisions are so grouped that each student receives instruction in tutorial medicine one day per week in the Out-Patients Department and one day every alternate week in the wards.

This scheme can be represented graphically as set out on page 281.

Students of the fifth year are arranged in five divisions, A, B, C, D and E, and each of these divisions is again equally divided. A list of names of the students belonging to each of these divisions and subdivisions is then drawn up.

Each division is attached to one of the honorary physicians of the hospital (of whom there are five) and, as with the fourth year, each division changes the physician to which it is attached at the end of each session. In addition during this year work is allotted at available times to each division in the gynæcological wards and Out-Patients Department, in the Ophthalmic and Ear, Nose and Throat Departments and in the Dermatological Department. Instruction in the administration of anæsthetics is given.

Lectures are delivered twice weekly during the Lent, Trinity and Michaemas terms by lecturers appointed by the University. During the January, March and May sessions instruction is given in tutorial medicine. This scheme can be represented graphically (see p. 281).

It will thus be seen by this graphic representation of the work done that in the fourth and fifth years the whole of the ground of surgery and medicine and of the special subjects is covered as far as clinical teaching is concerned.

Tutorial and clinical lecturers are appointed by the University. The honorary medical officers at the hospital, as part of their duties, undertake the instruction of the students attached to them in the wards, at operations and in the out-patients departments. In addition to the work shown, a quantity of tutorial work is performed by the resident medical officers of the hospital in the case of students attached to their own honorary medical officers and by the Surgical and Medical Registrars of the Hospital in practical instruction in history taking, methods and significance of clinical examination and demonstrations in urine examination, etc..

The lecturers and tutors holding office at present are:—

Lecturers in Clinical Medicine: Dr. G. E. Rennie, Dr. Sinclair Gillies, Dr. C. Bickerton Blackburn, O.B.E..

Tutors in Medicine: Dr. J. I. C. Cosh, Dr. S. A. Smith.

Lecturers in Clinical Surgery: Dr. Charles MacLaurin, Dr. G. H. Abbott, Dr. R. Gordon Craig.

Tutor in Surgery: Dr. J. L. McKelvey.

Tutor in Anæsthetics: Dr. M. C. Lidwill.

APPENDIX II.

(Prepared for the purposes of this article by Dr. Harold Ritchie, Honorary Assistant Physician, and Dr. E. H. Stokes, Assistant Medical Superintendent, the Sydney Hospital.)

The Sydney Hospital Clinical School for University Students.

The Clinical School at the Sydney Hospital is under the direction of a Board of Medical Studies, composed of certain elected members of the honorary medical staff with the assistance of the Medical Superintendent.

On entry to hospital at the end of his third year, the student for two months is not allotted to any particular surgeon for bedside instruction. However, he commences a course of instruction in tutorial surgery and clinical surgery during this period. At the end of this time, having familiarized himself with the routine of hospital practice, he acts as surgical dresser to each honorary surgeon in turn; he also attends the Surgical Out-Patient Department and acts as dresser in the Casualty Department. At the conclusion of his period of training with each honorary surgeon, he is given a certificate if his work has been satisfactory. On the other hand, lack of application and irregularity in attendance is reported by the honorary surgeon to the Board of Medical Studies, who may advise the Dean of the Faculty of Medicine as to the necessity of instituting disciplinary measures.

The surgical tutor, under direction of the Lecturers in Surgery and Clinical Surgery, conducts a course of instruction of a preparatory nature in regional examination and surgical technique. This course is essentially practical and conforms as closely as possible to the scheme laid down in the University Calendar.

The clinical surgery course consists of a series of fifty lecture demonstrations of one and a half hours each. The student is instructed in differential diagnosis, prognosis and treatment of surgical conditions. This course, too, is essentially of a practical nature.

In addition to formal teaching each honorary surgeon acts as clinical instructor at the bedside or in the out-door department and the student acts as assistant when a patient allotted to him for study is operated upon.

A certain number of demonstrations in pathology and skiagraphy in their relation to surgery is also given during the fourth year.

At the last term of the fourth year the student enters the medical wards and commences courses in tutorial medicine and clinical medicine, closely comparable in every way to those in tutorial surgery and clinical surgery. Appropriate clinical instruction of an informal nature is given by the honorary physicians. In addition the student acts as clinical clerk to the cases allotted to him. During this year the student is dresser in the gynæcological wards and receives appropriate instruction in the Gynæcological Out-Patient Department. He also attend in-door and out-door clinics in diseases of the eye, ear, nose and throat and skin.

A limited number of demonstrations is given of the applications of X-ray work to clinical medicine.

During both the fourth and fifth year the student

is encouraged to familiarize himself with the more usual methods of clinical pathology. In addition numerous *post mortem* demonstrations are given, at which attendance is compulsory. There is also a practical course in the administration of anæsthetics, in which individual tuition is given. Attendance is insisted upon.

The extent of the Hospital's activities and more particularly the large number of out-patients who seek its aid, affords the student a wealth of clinical material from which he cannot fail to garner a rich harvest of experience.

Opportunities for the study of various tropical diseases are not infrequently offered by the Hospital owing to its proximity to the overseas wharves; whilst as the centre of a large industrial district, its casualty practice is very large and increasing day by day. For instance, the number of patients with fractured bones who come for treatment, is so great as to have necessitated the formation of a special out-door clinic for treatment of ambulatory cases of this class of accident alone.

The lecturers and tutors are elected from their number by the honorary medical staff, subject to approval by the Senate of the University. The present holders are:—

Lecturer in Clinical Medicine: J. Macdonald Gill, M.D., L.R.C.P. (Lond.), M.R.C.S. (Eng.).
Medical Tutor: H. Hamilton Marshall, M.B., M.S. (Edin.).
Lecturer in Clinical Surgery: Sir Herbert Maitland, M.B., Ch.M. (Syd.).
Surgical Tutor: A. J. Aspinall, M.B., Ch.M. (Syd.).

THE MEDICAL SCHOOL OF THE UNIVERSITY OF MELBOURNE.

(Prepared by Special Request by the Dean of the Faculty of Medicine.)

Chancellor: Sir John H. MacFarland, M.A., LL.D..
Vice-Chancellor: Sir John Grice, B.A., LL.B..
Dean of Medical Faculty: Professor Sir Harry Allen, M.D., LL.D..
Registrar: J. P. Bainbridge.
Handbook: The University Calendar (Annual).

History.

The University of Melbourne was established by law in 1853, and opened to students in 1855. Medical classes were inaugurated in 1862 and were transferred to the newly erected Medical School in 1864. From the outset the curriculum for M.B. extended over five academic years and in 1911 it was lengthened to five calendar years.

Government.

The government of the University is mainly entrusted to the Council, which consists of twenty members elected by the Senate and three members appointed by the Governor in Council. At present the Council includes four medical members. The Senate consists of all graduates who are doctors or masters. No statute or regulation made by the Council is presented to the Governor for allowance until it has been passed by the Senate, which has the right of amendment, as well as of veto. In all medical educational matters and in appointments of lecturers, demonstrators and examiners the Council is advised by the Faculty of Medicine, which consists of 27 members, including the members of Council who are legally qualified medical practitioners, the professors and independent lecturers of the Medical School, the Inspector-General of the Insane, the Medical Inspector of the Board of Public Health, representatives of the staffs of the clinical hospitals, both general and special, and of the School of Pharmacy, and any other University or clinical or pharmaceutical teachers nominated by the Faculty and appointed by the Council.

Degrees and Diplomas.

The following degrees and diplomas are issued:—
(*i.*) Bachelor of Medicine and Bachelor of Surgery (M.B., B.S.);
(*ii.*) Doctor of Medicine (M.D.);
(*iii.*) Master of Surgery (M.S.);
(*iv.*) Diploma of Public Health (D.P.H.);
(*v.*) Diploma of Tropical Medicine (D.T.M.).

Preliminary Education.

Every candidate for admission to the Medical School, unless a graduate in Arts or having completed two years for the degree of B.Sc., must possess the school-leaving certificate. This implies the preceding school intermediate certificate, which is adjusted to a course of education during three years at a secondary school, with successful examination in six subjects, including English, a branch of mathematics and either one other language or history and civics. After a further year spent at a secondary school comes the school-leaving examination, in which the candidate must pass in English and three other subjects. Many candidates pass an additional year at school and compete at the leaving honours examination. In order to provide freedom and flexibility in school methods, schools that are systematically inspected and approved by inspectors nominated by the University Schools Board, are placed in a separate class and candidates from such schools are given the intermediate certificate on a satisfactory *testamur* from the headmaster and are similarly allowed two of the optional subjects in the school leaving examination. All candidates must have passed or received credit for Latin and geometry at the intermediate or higher standard. It is proposed to make these subjects optional.

Division of the Course for M.B. and B.S..

The first year is devoted to elementary science under Division I.. The second year and two of the three lecture terms of the third year are given to anatomy and physiology under Division II. A year is given to Division III., including pathology and bacteriology, *materia medica* and pharmacy, therapeutics, hygiene and regional and applied anatomy, with lectures but not examination in obstetrics and gynæcology. Division IV. extends to the end of the course and includes a short course of forensic medicine and lectures on medicine and surgery during one year. Clinical work commences with Division III. in the third term of the third year and in future will extend continuously throughout the second half of the course. Groups of students will be in vacation from time to time, but the general hospitals will

never be without their adequate team of clinical workers.

Statistical Details.

The medical school included 109 students taking full courses in 1879, 208 in 1886, 300 in 1907, 387 in 1914, 356 in 1915, 434 in 1916, 482 in 1917, 512 in 1918, 644 in 1919. The distribution of students in the several years in 1919 was as follows: First year, 209; second year, 171; third year, 121; fourth year, 65; fifth year, 78. In addition to the full course students, a variable number attend single subjects. Provision is made also for instruction of dental and massage students in certain subjects.

Details of Course for M.B., B.S..

Division I..

Chemistry.—Professor: D. Orme Masson, C.B.E., M.A., D.Sc., F.I.C., F.R.S.. Associate Professor: A. C. D. Rivett, B.A., D.Sc.. Demonstrator: Leila A. Green, M.Sc.. About 100 lectures on general chemical physics and inorganic chemistry and the elements of organic chemistry, with 60 labortaory meetings of two hours each.

Natural Philosophy.—Professor: T. H. Laby, M.A.. Lecturer and Demonstrator: E. O. Herens, M.Sc.. About 80 lectures, including mechanics, statics, dynamics, heat, sound, light, electricity and magnetism, with 60 laboratory meetings of two hours each. The course for medical students is already somewhat specialized and will probably become more so in the near future. A laboratory for X-ray work has been built and equipped in the department.

Zoology (Medical Course).—Professor: W. E. Agar, M.A., D.Sc.. Lecturer and Demonstrator: Georgina Sweet, D.Sc.. About 60 lectures in the first and second terms, with 40 laboratory meetings of two hours each. The course is highly specialized for medical students. In addition to the elements of vertebrate and invertebrate morphology and a more detailed study of the crayfish, an insect, the shark, frog and rabbit, and the development of the bird and fœtal membranes in mammalia, it includes the structure and life history of unicellular animals and the more important types of parasites of man, with the life history of flies and mosquitos.

Botany (Medical Course).—Professor: A. J. Ewart, D.Sc., Ph.D., F.L.S.. Lecturer and Demonstrator: Ethel I. McLellan, B.Sc.. Caroline Kay Scholar: Vacant. Eleven lectures in the third term, with fourteen hours' laboratory work. The course is highly specialized, including study of the plant cell in its structure, growth, physiology and multiplication, the storage food materials, nutrition, respiration and transpiration in plants and the structure and history of a typical bacterium, of yeasts and of fungi, especially the pathogenic fungi.

Pass and honour examinations are held in November, with supplementary examinations in the March following. Without special permission, no one can commence Division II. who has not passed in all subjects of Division I..

Division II..

The subjects of this division are anatomy, including histology, and physiology. The work extends over the second year and two terms of the third year.

Anatomy.—Professor: R. J. A. Berry, M.D., Ch.M., F.R.C.S. (Ed.), F.R.S.E.. Senior Lecturer: J. H. Anderson, C.M.G., C.B.E., M.D., B.S.. Stewart Lecturer: F. G. Middleton, M.B., B.S.. Lecturer on Histology and Human Embryology: L. E. Hurley, M.D., B.S.. Stewart Scholar: Vacant. Over 120 lectures are given in anatomy, distributed as follows: Second year: First term, embryology; second term, neurology; third term, topographical. Third year: First and second terms, topographical; second term, neurology. Every student dissects the whole body twice. Lectures on histology are given once a week during the first and second terms of the second year, with an optional course once a week in the corresponding terms of the third year. Nearly 40 meetings of a laboratory class in histology are provided, each 1½ hours, with 20 optional meetings in addition. There is a large museum of anatomy, including frozen sections, permanent dissections, anthropological specimens, bone room, etc.. Special classes are held for prosectors, honour students, etc..

Physiology.—Professor: W. A. Osborne, M.B., B.Ch., D.Sc.. Lecturer on Physiology and Bio-Chemistry: W. J. Young, D.Sc.. Lecturer and Demonstrator: L. A. I. Maxwell, M.Sc., B. Agr. Sc., M.B., B.S.. Honorary Lecturer on Special Senses: Sir James W. Barrett, K.B.E., C.B., C.M.G., M.D., M.S., F.R.C.S.. Honorary Lecturer on Clinical Physiology: J. F. Wilkinson, M.D., B.S.. A hundred lectures (including ten on special senses), in which the subject is presented objectively by experiments and demonstrations, the students reading the appropriate chapters of the textbook. Printed synopses are also supplied for the special senses. Thirty class meetings, each of two hours, are held in practical biochemistry during the three terms of the second year, typewritten sheets of instructions being supplied. Ten class meetings in experimental physiology are held in the third term of the second year. Nine class meetings are provided in clinical biochemistry in the first term of the third year and ten lectures on physiological pharmacology, with experiments and demonstrations, in the second term of the third year. Honour classes are held in practical biochemistry and biophysics.

The examination in Division II. is in August of the third year. Candidates who pass in both subjects proceed with Division III.. Those rejected in both subjects must repeat their work for twelve months before re-examination. Those rejected in one subject may proceed at their own risk with the work of Division III. for one term and present the missing subject at supplementary examination in March of the fourth year. If they fail to pass, they must repeat the work of Division II. for two terms and present both subjects in the August following.

Division III..

Pathology and bacteriology are treated as one subject for examination purposes, but the departments are distinct.

Pathology.—Professor: Sir Harry Allen, M.D., LL.D.. Senior Lecturer and Demonstrator: F. L. Apperly, M.A., M.B., B.Ch. (Oxon.), M.R.C.S., L.R.C.P.. Stewart Lecturer and Demonstrator: J. I. Connor, M.B., M.S., D.T.M. *et* Hyg.. Beaney Scholar: S. O. Cowen, M.B., B.S..

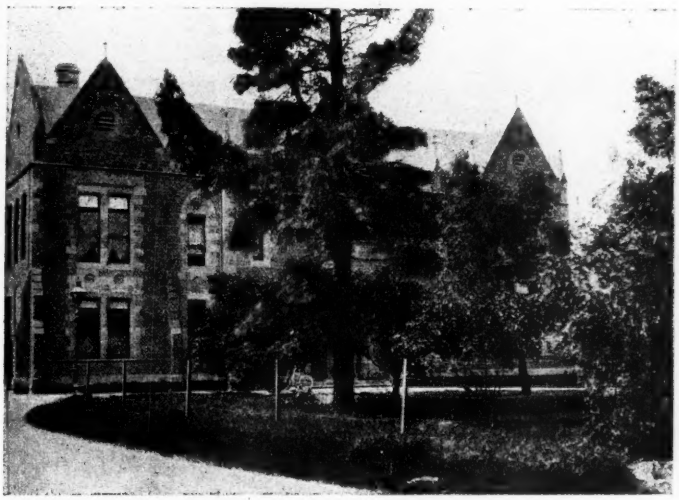
Bacteriology.—Lecturer and Director of Laboratories: R. J. Bull, M.D., B.S..

In pathology about 72 lectures are given, mainly demonstrations of specimens. A full set of printed notes is supplied, reinforcing the text-books, with numbered references to all specimens shown. The Museum of Pathology contains about 15,000 specimens, to which have recently been added about 450 specimens belonging to the Military Medical Museum.

Twenty lectures in elementary bacteriology, with practical work, each meeting occupying two hours, are given in the third term of the third year. A printed guide is available, showing the work of each meeting.

The practical class in pathological histology meets about 35 times in the fourth year (including part of the long vacation) and each student mounts about 84 specimens, which are fully described in a printed handbook.

The Professor's assistants conduct a set *post-mortem* examination as far as possible daily at the Melbourne Hospital. Other *post-mortem* examinations are also conducted at the Melbourne Hospital and provision is also made for such work at the other general hospitals. Classes in clinical pathology will, in future, be held at the Walter and Eliza Hall Institute of Research in Pathology and Medicine (Director, S. W. Patterson, M.D., D.Sc.; First Assistant, N. H. Fairley, O.B.E., M.D., M.R.C.P.).



School of Anatomy, University of Melbourne.

Materia Medica and Pharmacy.—Lecturer: B. L. Stanton. About 20 lecture-demonstrations are given in the third term of the third year at the School of Pharmacy. Attention is concentrated on the more important drugs. Examination in this subject follows immediately on the teaching.

Hygiene.—Lecturer: T. W. Sinclair, M.D., B.S., D.P.H.. About 28 lectures, with various practical demonstrations, visits to sanitary works, factories, etc..

Therapeutics.—Lecturer: H. Hume Turnbull, M.D., B.S.. Fifteen lectures in the first and second terms of the fourth year.

Regional and Applied Anatomy.—Lecturer: H. Alan S. Newton, M.B., M.S., F.R.C.S.. Nineteen lectures and demonstrations in the first and second terms of the fourth year.

The subjects of Division III. rank for examination as single subjects. The main examination is in August of the fourth year. No candidate can enter the final examination till he has passed in all the subjects of Division III..

Division IV..

Medicine. — Lecturer: Sir Henry Maudsley, K.C.M.G., M.D., F.R.C.P.. Stewart Scholar: M. D. Silberberg, M.D..

Surgery.—Lecturer: F. D. Bird, C.B., M.B., M.S., Honorary F.R.C.S.. Stewart Scholar: H. A. S. Newton, M.B., M.S., F.R.C.S..

Hitherto 80 lectures have been given in each of these subjects in the third term of the fourth year and the first and second terms of the fifth year. It is proposed to reduce the number to 60.

Obstetrics and Gynæcology.—Lecturer: G. Horne, M.A., M.D.. Fifty-five lectures are given in Division III. during the first and second terms of the fourth year, so that lectures on obstetrics may be completed before candidates attend practical midwifery. Attendance on 20 cases of midwifery is compulsory and also attendance on practical gynæcology during six weeks subsequent to completion of lectures on gynæcology. The majority of students go into residence at the Women's Hospital for three weeks for practical midwifery. Practical gynæcology may be attended at the Women's Hospital or in the special departments of the general hospitals. The examination is included in the final examination at the conclusion of the course.

Forensic Medicine. — Lecturer: C. H. Mollison, M.B., B.S., M.R.C.S.. About 20 lectures in the third term of the fourth year. The examination may be taken in December of the fourth year or later, or at the final examination.

Military Medicine.—Selected officers, with actual war experience, will in future give three lectures in each of the following subjects from the military standpoint: medicine, surgery, pathology, bacteriology, hygiene.

Clinical Medicine and Clinical Surgery.—These are the great subjects of the second half of the course. Attendance should be continuous for 30 months, with short vacations. The recognized general clinical hospitals are the Melbourne Hospital (Dean, W. Kent Hughes, M.B., M.R.C.S.; Sub-Dean, T. E. V. Hurley, C.M.G., M.D., M.S.), the Alfred Hospital (Dean, R. Hamilton Russell, F.R.C.S.) and the St. Vincent's Hospital (Dean, L. S. Latham, M.A., M.D.). All physicians and surgeons of these hospitals are recognized instructors. The University prescribes that attendance must include medical and surgical tutorial classes, medical and surgical in-patient and out-

patient practice, clinical lectures, dressership, clerkship, *post-mortem* examinations and assistantship in the out-patient department. The actual scheme of work is drafted by the staff of each hospital and approved by the Faculty of Medicine. Full details are given in the University Calendar. Students must keep records of the patients in the beds allotted to them in a prescribed note-book and these note-books are submitted to the examiners in clinical medicine and clinical surgery for pass and honours at the final examination. The clinical lecturers and clinical tutors at each hospital are appointed by the University, as follows:—

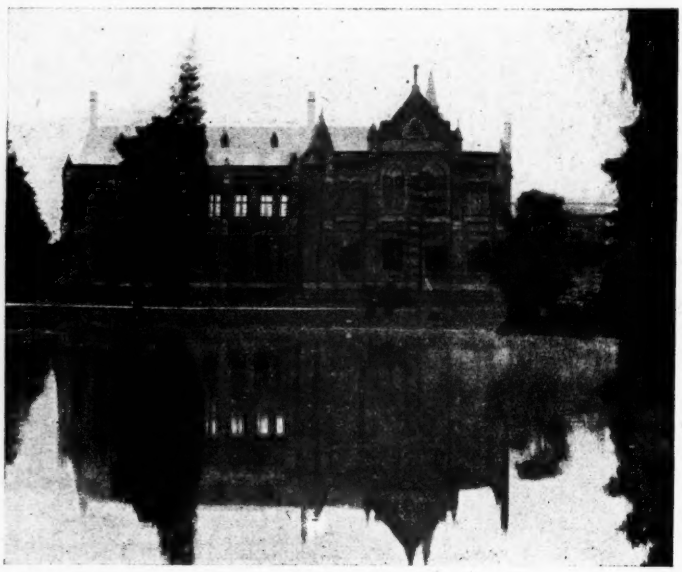
Melbourne Hospital.—Clinical Medicine: Lecturers—Drs. W. R. Boyd, R. R. Stawell and J. F. Wilkinson; Tutors—Drs. K. Hiller, S. V. Sewell, H. H. Turnbull and F. B. Lawton. Clinical Surgery: Lecturers—Dr. J. Gordon, Mr. F. H. Langlands, Dr. B. Kilvington; Tutors—Drs. T. E. V. Hurley, T. E. L. Lambert, W. G. D. Upjohn and Mr. H. A. S. Newton.

Alfred Hospital.—Clinical Medicine: Lecturer—Dr. J. F. Mackeddie; Tutors—Drs. W. S. Laurie, J. P. Major, M. D. Silberberg and W. E. Summons. Clinical Surgery: Lecturer—Mr. R. C. Brown; Tutors—Drs. R. St. C. Stewart, A. F. Maclure and Mr. J. Kennedy.

St. Vincent's Hospital. — Clinical Medicine: Lecturers—Dr. L. S. Latham, Mr. A. Lewers; Tutors—Mr. T. P. Noonan and Mr. F. E. Keane. Clinical Surgery: Lecturers—Drs. D. M. Morton, T. P. Dunhill, J. A. R. Smith and Mr. H. B. Devine; Tutors—Mr. L. Doyle, Mr. H. S. Bush.

Special Departments.—The following attendances are compulsory in Division IV.: Ophthalmology, twelve attendances during nine weeks; diseases of children, daily during six weeks; diseases of the skin, twelve attendances during six weeks; mental diseases, twelve attendances during twelve weeks; fever hospital, six attendances during six weeks; diseases of the throat, nose and ear, six attendances; venereal diseases, eighteen attendances during nine weeks. For these purposes the following institutions are recognized: The Eye and Ear Hospital, the Children's Hospital, the Receiving House for Acute Mental Cases and the Kew Hospital for the Insane and the special departments of the general hospitals. Candidates must also acquire proficiency in vaccination under a public vaccinator, attend a course of demonstrations in operative surgery under the lecturer on surgery, attend six lectures on anæsthetics (lecturers, Mr. Maxwell and Mr. F. L. Davies), together with practical work under an instructor approved by the Faculty of Medicine, and attend three lectures on medical ethics (Dr. A. V. M. Anderson).

Final Examination.—The final examination is held in March, at the outset of the sixth year, and includes the following subjects, each of which must be passed: Medicine, clinical medicine, surgery, clinical surgery, obstetrics and gynæcology. No candidate can pass in clinical medicine or clinical surgery who has not passed in medicine or surgery, as the case may be. A supplementary examination is held in the August following. If the whole examination is not completed in one or both of these examinations, all subjects must be presented afresh next year. Candidates who do not pass in clinical medicine or clinical surgery, must complete further hospital practice before re-examination.



School of Biology, University of Melbourne.

Honour Examinations and Prizes.

Honour examinations are held in almost all the subjects of every division. Exhibitions are available in natural philosophy (£25), chemistry (£25), zoology and botany (£15), anatomy (£30), physiology (£30), pathology and bacteriology (£20), therapeutics and public health (£20) and the University Scholarship in medicine (£50), the Beaney Scholarship in surgery (£70), the Fulton Scholarship in obstetrics and gynæcology (£40), the Jamieson Prize in clinical medicine (£5) and the University Prize in forensic medicine (£5). The Beaney Scholarship in pathology (£70) and the provision under the Stewart Bequest (£125) for physiology are augmented by the University as teaching foundations.

Fees.

The annual fees to the University are £23, together with a sports fee of one guinea for male students and 7s. 6d. for female students and a club house fee of one guinea (half a guinea for students of affiliated colleges or of the Teachers' College). The fee to the School of Pharmacy is £6 16s. 6d.. The fees to a general hospital forty-three guineas. Special departments (including midwifery and gynæcology),

£17 6s. 6d.. Total, £194 16s., for ordinary male students.

The number of women students in 1919 was 107, or about one for every five male students. No distinctions are made in the teaching of male and female students. The fee for the degrees of M.B. and B.S. is £7 7s..

The resident medical officers in the Melbourne, Alfred and St. Vincent's Hospitals, and in certain provincial hospitals, are appointed annually, according to their places in the final honour examination.

Affiliated Colleges.

Students may reside at any of the affiliated colleges (Trinity, Ormond, Queen's, Newman) if they so desire. Fees (not covering vacations) are about 90 guineas for the first year and 80 guineas for any subsequent year.

Degree of M.D..

The examination may be taken twelve months after M.B., but the degree not till two years later. The candidate may proceed by examination only, or by thesis with examination in clinical medicine. The examination is in medicine (written paper, commentary on printed case, clinical medicine and oral), with either (*a*) obstetrics and medical gynæcology, or (*b*) diseases of children, or (*c*) diseases of the nervous system, including insanity. A thesis must not be an ordinary compilation from books, nor a mere compendium of cases, nor merely observational, but should be a substantial contribution to knowledge. The examination is held in March. Fee for examination and degree is £10 10s..

Degree of M.S..

Conditions for entrance resemble those for M.D.. The examination consists of Part I., including surgical anatomy and surgical pathology, and Part II., surgery (written paper, commentaries on printed cases, clinical examination, operations on the dead subject and oral examination). Part I. may be taken separately or with Part II., but no one may pass in Part II. who has not passed in Part I..

The fee for each part of the examination is £5 5s.. There is no further fee for the degree. The examination is held in March.

Diploma of D.P.H..

The examinations are open to bachelors of medicine and surgery of twelve months' standing or to persons qualified to be registered medical practitioners of the United Kingdom of like standing. The regulations closely resemble those for any Diploma of Public Health in the United Kingdom. Part I. of the examination includes chemistry, physics, physiology, microscopy, engineering and building construction, and practical pathology and bacteriology, each case as applied to public health. Part II. includes (*a*) ætiology, diagnosis and prevention of disease, (*b*) general hygiene, (*c*) sanitary law and administration, (*d*) vital statistics and statistical methods, (*e*) sanitary investigation and reporting. The syllabus of constructional work extends from March to the end of November. The fees for instruction amount to thirty-two guineas, together with a fee for fever hospital work. The fee for each part of the examination is £5 5s.. The examination is held in December. No further fee is required for the diploma.

Diploma of D.T.M..

Candidates must be qualified medical practitioners of one of the Australian States, with qualifications of twelve months' standing. They must have passed Part I. of the examination for the Diploma of Public Health or an examination approved in lieu thereof, or have attended an approved course of special instruction. After qualifying as above, they must attend a special course of theoretical and practical instruction during three months at the Australian Institute of Tropical Medicine and clinical work during three months in the attached hospital wards at Townsville. The examination is held at the Institute and follows upon the completion of the course. Total fees seventeen guineas, including diploma.

Medical School Library.

The Library includes 13,724 volumes. The sets of journals are wide, representative of British, American, French and German literature.

War Record.

Graduates, undergraduates, past students and teachers of the Medical School serving in the Australian Imperial Force or in the Royal Army Medical Corps numbered 710. Of these, 52 gave their lives, either killed in battle or dying of wounds or dying of disease. Five others died while on home military service. Distinctions won include: K.C.M.G., 1; K.B.E., 1; K.B., 2; C.B., 3; C.M.G., 10; C.B.E., 4; O.B.E., 9; D.S.O., 45; M.C,, 60 (4 with bar); *Croix de Chevalier, Legion d'Honneur*, 1; *Croix de Guerre* (France), 5; *Croix de Guerre* (Belgium), 1; Italian Order of St. Mark and St. Lazarus, 1; Order of Nile (3rd Class), 1; Mons Medal, 1; *Medaille d'Honneur*, 1.

THE SCHOOL OF MEDICINE OF THE UNIVERSITY OF ADELAIDE.[1]

(Prepared by Special Request by the Dean of the Faculty of Medicine.)

"The University of Adelaide was established by Act of Parliament in 1874, and in 1881 Royal Letters Patent were issued by Her Majesty Queen Victoria, declaring that the degrees granted by it should be recognized as academic distinctions, and be entitled to rank precedence and consideration throughout the British Empire, as if granted by any University in the United Kingdom." So run the opening words of the preface to the Calendar for 1920 of the University of Adelaide. But beneath these rather formal legal phrases lies the interesting story of its inception some two years before.

It was in 1872 that Sir William Watson Hughes offered the princely donation of £20,000 to a theological institution, Union College. Its directors, in a spirit of far-seeing unselfishness, which evidenced both largeness of heart and breadth of mind, proposed the devotion of this gift to the foundation of a uni-

[1] The writer desires to acknowledge his great indebtedness to Dr. B. Poulton, as much of the information herein contained has been derived and several quotations made from his Presidential Address before the Annual Meeting of the South Australian Branch of the British Medical Association, 1913.

versity rather than to the enlargement of a denominational college and so stamped themselves as State benefactors and patriots of a high order.

Chairs in classics and in English literature were established. Two years later Sir Thomas Elder donated an equal sum of £20,000 for the endowment of chairs in mathematics and natural science; in 1878 John Howard Angas gave £4,000 to found an engineering scholarship, and by 1880 public subscription had provided £1,100 more for general purposes and scholarships. The Government granted 50,000 acres of country lands as an endowment and five acres in the park lands as a site for university buildings and promised 5% per annum on all capital funds, equivalent at that time to £2,000 a year. This was the beginning of the University of Adelaide.

History of the Faculty of Medicine.

Edward Charles Stirling (the late Sir Edward Stirling, F.R.S.), a South Australian, who had studied his profession in England, returned to his native land in 1881 and commenced practice as a surgeon. In the following year he was appointed Lecturer in Physiology to students attending from the Education Department at the University. He may be regarded as the creator of its School of Medicine. Sir Thomas Elder, who was a personal friend, in 1883 gave £10,000 to endow it, and the year after Mr. John Howard Angas endowed a chair of chemistry with a gift of £6,000.

"During 1884 the school was formally founded and the Chancellor, then the Honourable Chief Justice Way, reported to the Governor that the Council had determined to appoint in the first instance a professor of anatomy, a lecturer on physiology and a professor of chemistry." E. H. Rennie, M.A. (Sydney), D.Sc. (London), was selected for this last chair, which he has continuously filled with conspicuous ability to this day. Dr. Stirling paid a visit to England for the purpose of equipping his physiological laboratory with the most recent and efficient apparatus and of securing a professor of anatomy. Assisted by Professor Flower, F.R.S., of the British Museum, and Professor Humphrey, of Cambridge, he chose Dr. Archibald Watson, who returned to Adelaide with him and, taking the Chair of Anatomy, occupied it until the end of 1919—a period of thirty-five years. "An *Anatomy Act* was passed by Parliament and a provisional anatomical department secured, consisting of an old, disused powder magazine as a mortuary, with a well-lighted dissecting-room adjoining it." Within two years what was intended as the first part of a medical block was erected, consisting of a lecture theatre and rooms for biological and histological laboratory work, at a cost of £2,000.

Arrangements had thus been made for meeting the usual requirements for the first two years' study in an ordinary medical curriculum and students so far educated would be eligible *ad eundem statum* in other Australian or British universities, where they could continue their special medical and surgical clinical work.

One of the first questions of moment to arise was the admission of women to the medical school. Dr. Stirling, an advocate of the rights of women, who, when in Parliament, introduced a measure for their political enfranchisement, was very favourably disposed thereto. On inquiry it was learned that Sydney University had already one lady student. The Chancellor, who was the Chief Justice Way, and the Vice-Chancellor, Dr. Barlow, a sound lawyer, were of opinon that the Act of Parliament by which the University was instituted, permitted the entry of women; and so the Faculty recommended that they be granted the same privileges as men; and in the second year of the existence if the medical school a lady, Miss Laura Fowler, was enrolled and since that time a considerable number of women have graduated in medicine, some of whom are practising in the city and one is a member of the Council of the University.

No sooner, however, had plans been perfected for two years of the medical course than the absolute necessity for a complete curriculum in South Australia became abundantly evident. So a scheme was evolved for a full professional education up to graduation and new regulations were framed for matriculation. But the financial difficulty was the main consideration and ways and means had to be devised. For some years what were known as South Australian Scholarships had been provided by Government, enabling holders to travel to England and take a course of study at a British university. They were four in number, of the value of £200 per annum and tenable for four years, so that they involved an expenditure of £800 a year. In 1886, when proposing their discontinuance, the Government was induced to transfer this sum to the University and later the Minister of Education agreed to the suggestion of the Council that this addition to its income should be used for medical education. This, however, did not suffice to meet the increased expenditure entailed by the addition of three further years to the medical curriculum, especially as the scholarships had still some years to run. Sir Thomas Elder again came to the assistance of the University and donated another £1,000, thus providing £500 a year for two years.

A further addition to the scanty income of the University, through the Gosse Memorial Fund, had a pathetic origin. Dr. Charles Gosse was a young South Australian ophthalmic surgeon, the first medical practitioner in this province to practise as a specialist. He was a man with a very attractive personality, both to the profession and the people, and had aided considerably in the initiation of the medical school. He died under tragic circumstances from a carriage accident; and a sum of £800 was raised (subsequently increased to £1,125) as a tribute to his memory and devoted to the endowment of the Charles Gosse Lectureship in Ophthalmology.

A complete staff of lecturers was now appointed. In March, 1886, W. L. Cleland, M.B. (Edin.), the father of the recently appointed Professor of Pathology, was made Lecturer on *Materia Medica* and during the same year the names appear of J. Davies Thomas, M.D. (Lond.), F.R.C.S. (Eng.), J. C. Verco, M.D. (Lond.), F.R.C.S. (Eng.), joint Lecturers on Medicine and Therapeutics, W. Gardner, M.D. (Glas.), Lecturer on Surgery, M. J. Symons, M.D. (Edin.), on Ophthalmology, E. W. Way, M.B.

(Edin.), on Obstetrics and Diseases of Women, A. A. Lendon, M.D. (Lond.), on Forensic Medicine, A. S. Paterson, M.D. (Edin.), on Lunacy, W. Anstey Giles, M.D. (Edin.), on Aural Surgery, Professor A. Watson, M.D. (Paris and Göttn.), F.R.C.S. (Eng.), on Pathological Anatomy and Operative Surgery. Two years later Drs. Verco, Way and Hayward were also Lecturers on Clinical Medicine and Drs. Gardner, Görger and Stirling on Clinical Surgery.

In December, 1889, after a five years' course of study, the degrees of M.B., Ch.B., Adelaide, were conferred for the first time, the honoured recipients of this distinction being Messrs. Hope, Goldsmith, Lynch and C. Magarey, who are all wearing it to this day.

At the inception of the school a policy was inaugurated which has been followed until the present. Students are examined annually in the subjects of study for the year by their local teachers. If a given standard is reached, they enter upon the next year's course. Should this standard not be attained, they have to take the previous year's course of study again and present themselves for examination as before. Should they have failed, however, in only one subject, or at most in two, the Board of Examiners may recommend them for a supplementary examination in the one or two subjects in which they were weak and, passing this test, they are permitted to pursue the next year's curriculum. But in the final examinations at the end of the second year in anatomy, physiology and chemistry, and at the end of the fifth year in medicine, in surgery and in gynæcology, besides being examined by their own teachers in these subjects, papers are set by "outside examiners" belonging to the Universities of Melbourne and Sydney, who form their own estimate of the merit of candidates and either pass them or fail them or mark them doubtful; this estimate chiefly determines success or failure. Although this policy "entails much departmental work and considerable expense, it presents many manifest advantages" and is a guarantee in some measure of the standards of the school. "The hallmark of the Adelaide degree in medicine is in effect perpetually attested by the authorities of the other universities, who really act as independent censors of the school."

Although in 1886 two joint Lecturers in Medicine and Therapeutics were appointed, this was only a provisional arrangement. So when in 1890 Dr. J. Davies Thomas resigned, Dr. J. C. Verco took the full lectureship and carried it on until his resignation in 1915, when the present Lecturer, H. Swift, M.D. (Oxon.), succeeded him. Dr. Gardner, the Lecturer in Surgery, resigned at the same time as Dr. Thomas and was replaced by B. Poulton, M.D. (Melb.), M.R.C.S. (Eng.), who filled this office for thirty years and voluntarily retired at the end of 1919 and was followed by W. R. Cavenagh-Mainwaring, M.B. (Adelaide), F.R.C.S. (Eng.).

In 1901 T. Borthwick, M.B., Ch.M. (Edin.), who had been Director of the Elder Laboratory of the Adelaide Children's Hospital, was made Demonstrator of Bacteriology in the University and held this post with great advantage to the school until last year, when the department was transferred to the newly-created professorship of pathology. Since 1886 Professor Watson had not only presided over all the anatomical work, but had given lectures and demonstrations in pathological anatomy. In 1902 the Faculty of Medicine pointed out the desirability of creating a separate chair of pathology, but though this was urged, lack of funds prevented it and from year to year the same impecuniosity prevailed; and even when three years later a whole-time lecturer, at the modest salary of £300 a year was proposed, the amount could not be guaranteed, even though he would fulfil the duties of Honorary Pathologist at the Hospital and Curator of the Museum. However, in 1904 a lectureship was instituted in pathology and Dr. Cavenagh-Mainwaring was selected and retained office until the end of last year. In 1910 the question of a professor was again raised, but he could not be financed; so a second lectureship in practical pathology and patho-histology was created and C. T. C. de Crespigny, M.D. (Melb.), was chosen for the position. At last in 1919 the professorship was again brought forward and treated as a matter of urgency and arrangements were made by which a Professor of Pathology might be appointed who would act as Professor at the University, Director of the Government Laboratory and Honorary Pathologist at the Adelaide Hospital and Pathologist at the Mental Hospital, the Government and the Adelaide Hospital indirectly contributing to the expenses of the chair. The demonstratorship in bacteriology, the lectureships in pathology and in practical pathology and patho-histology were thus dissolved as separate departments and were combined in the one professorship of pathology.

In 1901 Dr. E. W. Way, the Lecturer on Obstetrics and the Diseases of Women, died and these two subjects were separated; obstetrics was entrusted to Dr. Lendon and gynæcology to J. A. G. Hamilton, B.A., M.B. (Dub.), both of whom still retain office.

Forensic medicine and lunacy, after being combined in one lectureship under Dr. W. L. Cleland, were later on separated once more; forensic medicine was ultimately transferred to R. S. Rogers, M.D. (Edin.), and M. H. Downey, M.B., B.S. (Melb.), became Lecturer on Psychological Medicine.

Materia medica was originally dealt with by Dr. Cleland and therapeutics by the Lecturers on Medicine; but later *materia medica* and therapeutics were grouped together and W. T. Hayward, LL.D. (Aber.), M.R.C.S. (Eng.), delivered a course of lectures on each subject, on the former during the second year and on the latter during the fifth.

During the many years Dr. Watson was Professor of Anatomy, he also delivered the course of lectures on operative surgery and in addition those on regional and surgical anatomy. But when he resigned a special lecturer on operative surgery was appointed, in the person of H. Simpson Newland, M.S. (Adel.), F.R.C.S. (Eng.), and a second on regional and surgical anatomy, namely, Malcolm L. Scott, M.S. (Adel.), F.R.C.S. (Eng.), who is also a demonstrator of anatomy to the medical students. The dental and massage students will receive their course of instruction in anatomy from another demonstrator and Professor Wood-Jones will also give a special course of

lectures on human and comparative dental anatomy.

When Dr. Lendon was Dean of the Faculty, he proposed the founding of a school of dentistry and when Dr. W. Anstey Giles occupied the chair in 1902 the proposal was revived and discussed. Several difficulties presented themselves, chief among which was that of providing opportunities for practical work and demonstrations, so the scheme had to be postponed. But lately it has been resuscitated and in 1918 regulations were drawn up for a complete course for a Bachelor of Dental Surgery degree and published in the Calendar for 1919 and some undergraduates were enrolled. Certain modifications in the regulations and schedules have recently been approved by the Council and the syllabus for the last two years of the four years' course arranged. Plans are now being prepared for an up-to-date department of dentistry in connexion with the Adelaide Hospital. Hitherto the State Dental Board, which registers dentists under the *Dental Act*, has for many years conducted an annual examination of candidates for a licence to practise and instruction in certain subjects has been afforded at the University through its professors, lecturers and demonstrators to students wishing to secure registration; university certificates of examinations passed in any such subjects of study have been accepted by the Dental Board in lieu of its own examination. It is anticipated that in the near future all aspirants for registration in the State will seek it through the portals of the University by taking its dental degree. Though hitherto under the direction of the Faculty of Medicine, the control of the School of Dentistry will during the present year be vested in a Faculty of Dentistry to be immediately created.

The Medical School.

The University buildings are situated on North Terrace, Adelaide, on the park lands which separate the northern and southern portions of the city. The history of those in use by the Medical School is easily told. As stated previously, the anatomical block in its primitive stage consisted of a disused powder magazine, which served as a mortuary, to which was added a temporary, well-lighted dissecting-room. But in 1901 a new anatomical block was built, consisting of a large, well-lighted and well-ventilated dissecting-room, with a mortuary attached, an equally large anatomical and pathological museum, as also rooms for the professor, the assistant, for male and for female students and for lectures. This has proved equal to requirements up to the present. Its erection was rendered possible through the very timely and munificent gift by Sir Thomas Elder in 1897 of two sums, one of £25,000 for the general purposes of the University and one of £20,000 as an endowment of the School of Medicine.

In 1886, immediately adjacent to the original University block was constructed what was intended to be the initial portion of a much larger medical building. It contained a lecture theatre and two laboratories, one above the other, for biology, histology and bio-chemistry. Attached to these was subsequently erected the Prince of Wales Theatre, with the chemical laboratories, engineering and geological schools and the Tate Museum. But the Medical School has quite outgrown its accommodation there, with no possibility of extension on the same premises. Happily, when an absolute need for expansion was forced on the Faculty and the Council and an amount of money necessary to erect a structure at all adequate for immediate requirements seemed out of reach, the sons and daughters of the late Mr. John Darling, a well-known merchant of South Australia, promised a sum of £15,000 towards a medical building in memory of their father. This will be commenced at once and will provide accommodation for physiology, animal biology, histology and bio-chemistry, besides lecture rooms, students' rooms and a medical library and will thus somewhat relieve the chronic congestion in the general library and in the department of botany and vegetable biology.

The Affiliated Hospitals.

The Adelaide Hospital lies only a few hundred yards to the east of the University buildings, in the same belt of park lands. Here nearly all the practical medical and surgical work is done. In its out-patient department and wards almost every section of professional study can be pursued: general medicine and surgery, neurology, gynæcology, ophthalmology, otology, laryngology, dermatology, radiology, pharmacy, dentistry and maternity. Evening venereal clinics have been established under the supervision of male and female medical practitioners.

Here, too, is a pathological and bacteriological laboratory and a small pathological museum, with specimens chiefly for demonstration purposes, and as this is becoming over full, the Government has agreed to provide a new museum in an upper story, as well as some additional rooms to the ground floor.

Attached to the Hospital, but in an adjacent suite of buildings, is an isolation block for several infectious diseases, scarlatina, diphtheria, measles, etc.; a tuberculosis section for advanced cases of pulmonary disease and wards for inoperable carcinoma. Though by no means an ideal suite (for it is an adaptation of an institution previously used for an altogether different purpose and is too small when epidemics are raging), it, nevertheless, provides material of its special kind for study when desired.

The Children's Hospital is situated in North Adelaide, adjoining the same belt of park lands, and is ideally located and very bright and airy. Last year an average of 87 cots was occupied, 1,194 in-patients were treated and 1,200 out-patients. Here also is the Elder Laboratory for the examination of pathological clinical material. University undergraduates are admitted to the wards and out-patient department to do clerking and dressing for three months in their fifth year and to attend a course of clinical lectures in medical and in surgical diseases of children.

The Mental Hospital lies just beyond the park lands, at Parkside. It is a large institution for the insane and accommodates some 1,175 inmates. It is under the charge of Dr. M. H. Downey, the University Lecturer on Psychological Medicine, and there the undergraduates receive their clinical instruction in mental diseases.

The Queen's Lying-in Home at Rose Park lies between the Adelaide and Mental Hospitals and here students can be accommodated while doing their mid-

wifery work. An extern midwifery department exists at the Adelaide Hospital, for attendance upon women at their own homes, with arrangements for prematernity clinics, so that during their gestation they can periodically attend as out-patients and any abnormality in their condition be detected and treated. It is under the direction of a resident medical officer and an honorary gynæcologist.

All these institutions are within quite a short distance of the University and this obviates loss of time in travelling to and fro.

Facilities for Medical Students.

The University has no residential colleges, but the suburbs commence within a quarter of a mile of the city boundary, separated only by the park lands, and are well supplied with train and tram service, so that healthy quarters are within easy reach. The River Torrens, with a boat-house, is but a few hundred yards away and the sports ground, very well kept, is on the further bank.

The medical undergraduates have a Medical Students' Society to which all belong on payment of a small membership fee. Monthly meetings are held in the Union room for reading and discussing scientific papers and exhibiting illustrative specimens. For many years the President has been one of the lecturers, an honour held at present by Dr. F. S. Hone. A publication, the *Adelaide Medical Students' Society Review*, is issued about three times a year.

The University Library possesses a very good medical section, quite apart from the rest and in its own room, where readers are undisturbed. Each professor has a special portion from the annual library grant for the purchase of such books as he may personally require; the Faculty of Medicine has a similar portion for works it may recommend on the suggestion of any of its members. This is further augmented by an annual donation of £50 by the South Australian Branch of the British Medical Association, all of whose members are, in return, allowed free access to the section. This donation is expended according to the decision of a Library Committee of the Branch and is chiefly utilized for the provision of medical periodicals. When the "Darling Building" is erected, the medical section of the Library will be accommodated therein; provision has been made by means of a special stack-room for the storage of many thousands of volumes.

During the past thirty years rather more than two hundred men and women have gained the M.B., B.S., degrees. Of these, 124 belong to the South Australian Branch of the British Medical Association and constitute nearly 50% of its membership. Eight hold positions on the teaching staff of the University, fifteen are on the honorary staff of the Adelaide Hospital and eight on that of the Children's Hospital. These figures are an index of the status of these degrees and of the esteem in which these graduates are held among their own people. Until 1889 South Australia was wholly supplied with medical practitioners educated abroad; after one generation has passed nearly a half are of home production.

The Degrees of Bachelor of Medicine and Bachelor of Surgery.

Before entering upon the medical course, candidates must be sixteen years of age and must have passed the Senior Public Examination in at least five subjects (not necessarily at one and the same examination); these must include English literature, Latin, arithmetic and algebra, geometry and either Greek, French or German. Before entry students must also have passed in physics, chemistry and elementary biology at the Higher Public Examination, or at the November examination for the University Bachelor of Science degree, or at a special examination held in March for intending medical students.

After matriculation comes a five years' course of medical study. The University has under consideration the question of extending the curriculum to six years by including in it the preliminary scientific subjects of physics, chemistry and biology, so that all medical students shall be taught these subjects at the University by its professors. Their studies would thus be uniform (from whatever school the students come) and would be exactly correlated with their instruction received subsequently. Communications have been sent to the other universities of Australia, suggesting concerted action, but no decision has hitherto been indicated.

The first two years of the medical course are devoted to the study of anatomy, physiology and chemistry, under the tuition of Professors Wood-Jones, Brailsford Robertson and Rennie, and to *materia medica*. The last three years are wholly given to the different branches of medicine and surgery; to surgery chiefly in the third year, to medicine in the fourth and in the fifth year to special sections, such as gynæcology, ophthalmology, otology. Pathology and bacteriology are taught during the third and fourth years by Professor Cleland. Public health and preventive medicine are allotted to the third, obstetrics to the fourth and therapeutics to the fifth year.

An examination is held during November in the subjects of study of each year. Those who fail (except in their final) in one or two subjects may be granted a supplementary examination in the following March and if they pass this, are granted the status of the next year in their course.

The fees for the full five years' course of instruction at the University, payable in yearly instalments, amount to £128 2s.; those for the five annual examinations to £15 15s. and for the degree when conferred £5 5s.. The fees for attendance at the Adelaide Hospital and the Children's Hospital are about £35 14s., making an approximate total of £185 17s..

The State Education Department grants twelve bursaries annually to the first twelve candidates in the pass list of the Higher Public Examination. Four of the twelve bursaries are given to candidates who have previously indicated their intention of taking a medical degree and in whose pass subjects are included those required for entrance upon a medical course. These bursaries are of considerable value, covering, as they do, all fees for the five years' University curriculum and for medical and surgical practice at the hospitals, besides £20 yearly for maintenance and at the discretion of the Minister of Education £40 if unable to reside with parents or guardian.

The following awards are made annually by the University:—

1. The Elder Prize of £10 for premier place in the First Class in the pass list at the end of the first year.
2. The Elder Prize of £10 for a similar place at the end of the second year.
3. The Dr. Davies-Thomas Scholarship of the value of £10 for the first place in the first class at the end of the third year.
4. Another similar Scholarship at the end of the fourth year.
5. The Everard Scholarship of £30 to the best student in the first class at the final examination.
6. The Dr. Charles Gosse Medal for the best student in the first class in ophthalmology in the fifth year.

The following may also be obtained:—

7. The Lister Prize of £7 and a bronze medal for a thesis on some clinical surgical or clinical medical subject by a graduate of not more than five years' standing.
8. The David Murray Scholarship for the encouragement of advanced work and original investigation, of the value of £25, for the best thesis for the Degree of Doctor of Medicine or Master of Surgery within three years of graduation.
9. The John L. Young Scholarship for Research, of the value of £35, which may be awarded for such work in any branch of knowledge, to present or past students or graduates of the University, with no limit as to age.
10. The Rhodes Scholarship at Oxford University, tenable for three years, of the value of £300 per annum. This is awarded every year, but not necessarily to a medical graduate or undergraduate, but to the candidate who best fulfils the conditions of the bequest. A notice just to hand intimates that, owing to the increased cost of living, the scholar must be prepared to supplement his yearly allowance by about £50 per annum.
11. What is of even more general value than any or all of the above is the opportunity of holding positions as resident medical officers in the affiliated hospitals. At the Adelaide Hospital nine are appointed annually from graduates of the previous year, according to order of merit in the pass list of the final examination. If one or more of the first nine graduates should decline the privilege this devolves upon the next on the list. By arrangement of the Medical Superintendent they are associated in rotation during successive terms with members of the honorary staff in the medical, surgical, gynæcological and special department and, if any preference in such allotment is expressed, this is granted also according to order of merit. The tenure of office is normally for one year, with food and quarters and a salary of £50 per annum. Two similar appointments are also available at the Children's Hospital. The post-graduate experience thus afforded is a professional distinction and a distinct professional advantage and constitutes an incentive to undergraduates to strive for as high a place as possible in their final examination.

Doctor of Medicine.

Only Bachelors of Medicine of the University of Adelaide (either by examination or admission *ad eundem gradum*), of three years' standing are eligible, except by special permission. This period may be reduced by the Council to an extent recommended by the Faculty:—

1. If the M.B. examination was passed in the first class.
2. If an office, residential or visiting, honorary or paid, has been held in any public hospital or approved institution.
3. If the candidate has been assisting in the teaching of this or some other recognized university.

Any one of the following five groups of subjects may be selected for examination:—

(*a*) General medicine, including that of the nervous system, medical ophthalmology, therapeutics and the history of medicine.

(*b*) Diseases of the nervous system, mental physiology and pathology and the history of those subjects.

(*c*) Pathology, including pathological anatomy, bacteriology and the history of those subjects.

(*d*) Obstetrics, gynæcology, the diseases of infancy and of childhood and the history of those subjects.

(*e*) State medicine in all its branches, including medical jurisprudence and hygiene and the history of those subjects.

A candidate may submit, with the notice of his intention to enter for the examination, an original thesis of his own composition on some branch of medical study or of the allied sciences and embodying the result of independent research. The thesis may be written specially for the degree, or be an already published work, or a paper or series of papers read before any of the recognized medical societies of Australasia or of Great Britain and the candidate must indicate wherein he considers that his thesis advances medical knowledge or practice. If the thesis be adjudged by the Faculty of Medicine or by examiners nominated by the Faculty to adjudicate upon it to be of sufficient merit, the candidate may be exempted by the Council from a part or the whole of the examination for the degree.

A printed or typewritten copy of any thesis approved by the examiners shall be deposited by the candidate in the Library of the University before he is admitted to the degree.

The application for examination with the theses (if presented) must be lodged with the Registrar not later than the first of July. The examination takes place in the third term of the academic year and the fees, payable in advance, are for examination £15 15s. and for the degree £10 10s.

Master of Surgery.

The examination for the degree shall be in the principles of surgery, including surgical anatomy, pathology, operative surgery and the history of those subjects and, in addition, in such one of the following groups as the candidate may select:—

(*a*) Gynæcology, including the surgery incidental to obstetrics and the history of those subjects.

(*b*) The surgery of the abdomen and its history.

(*c*) The surgery of the organs of the special senses, throat and larynx and the history of those subjects.

The regulations in reference to the eligibility of candidates, the time of application for examination, the presentation of a thesis, with any exemptions it

secures, the deposit of a copy in the Library of the University and the fees to be paid are, *mutatis mutandis*, similar to those for the degree of Doctor of Medicine. Fellowship of the Royal College of Surgeons of England is also considered among circumstances shortening the period of three years' graduation before examination.

THE STATISTICS OF THE MEDICAL PROFESSION.

The medical registers are not reliable guides for ascertaining the numerical strength of the medical profession in any country. In Australia some of the registers contain the names of medical practitioners who are dead, while all contain names of doctors who have either retired from practice or who have left the Commonwealth. It is impossible with the means at our disposal to estimate the number of deceased or retired medical practitioners whose names still appear on the lists. Corrections can be made for the other complicating factors. The following table which has been compiled from the six Medical Registers issued in the early months of 1920, contains information of some interest to the medical profession.

	N.S.W.	Vic.	Q'Land.	S. Aus.	W. Aus.	Tas.
Number of names on Register	2,246	1,908	372[2]	339[2]	345	123[2]
Number with addresses in respective State	1,377	1,530	372	339	212	123
Number in England	178	29	—	—	12	—
Number in New Zealand	48	17	—	—	4	—
Number elsewhere[1]	56	27	—	—	6	—
Graduates of Sydney University[3]	963	29	116	7	33	8
Graduates of Melbourne University[3]	214	1,092	54	45	111	34
Graduates of Adelaide University[3]	23	20	0	164	9	1
Registered on British diplomas[3]	988	712	192	109	187	75
Registered on foreign diplomas[3]	58	55	10	14	5	5

[1] Elsewhere means in a country other than Australia, New Zealand or the United Kingdom.
[2] These figures include only those members residing in the State. The others are classed in a separate list.
[3] The number of graduates or diplomates include all those registered in the State, irrespective of their place of residence.

It will be seen that there are 3,953 medical practitioners on the Australian Medical Registers with addresses in the State in which they are registered. This number should not include any deceased members of the profession. It certainly includes some who have retired from practice. The figures have been used as the basis of calculations, although it is recognized that they are too high for practical purposes. Taking the population of Australia at 5,000,000, there is one medical practitioner to each 1,267 persons of the community. There are approximately 1,400 persons to each doctor in New South Wales, 935 persons to each doctor in Victoria, 1,866 persons to each doctor in Queensland, 1,314 persons to each doctor in South Australia, 1,478 persons to each doctor in Western Australia and 1,698 persons to each doctor in Tasmania. This indicates that in the rural districts a medical practitioner has to give medical attendance to considerably more than 2,000 persons.

Of the 3,953 medical practitioners whose places of residence is situated in the State in which they are registered, 2,896 are members of the British Medical Association. This represents about 73.25%. The following figures show the position in the several States.

	N.S.W.	Vic.	Q'Land.	S. Aus.	W. Aus.	Tas.
Number of practitioners resident in State	1,377	1,530	372	339	212	123
Members of B.M.A.	1,188	961	278	266	137	66
Proportion of B.M.A. members to total number	86.3%	62.8%	74.7%	78.5%	64.6%	53.6%

It is difficult to account for the figures given for Victoria. Even if less energetic measures were taken to ascertain whether the names of deceased practitioners remain on the register(this appears to be extremely unlikely), the proportion of doctors to population, as well as the relative number of medical practitioners who are members of the British Medical Association, certainly suggest that the number given of medical practitioners actually resident within the State is too high. We are aware that in some instances young practitioners give their parents' address prior to entering into practice. An error due to this, however, would be but small. It is possible that the unexpectedly large number may be in part due to the location of military headquarters in Melbourne.

The figures demonstrate clearly that there is room for expansion of our Australian Medical Schools. In New South Wales just under 44% of the practitioners on the register have graduated at the Sydney University. In Victoria approximately 57.2% of the practitioners on the register have graduated at the University of Melbourne. In South Australia nearly 50% of the practitioners resident in the State are graduates of the University of Adelaide. The Medical Schools have lee way to make up before they can claim to supply the needs of the community.

POST-GRADUATE TRAINING.

The need for a permanent post-graduate course in the schools of medicine of our Universities has become an urgent one. In the past a few special courses have been organized both in Sydney and in Melbourne. More recently a definite scheme for regular post-graduate courses has been introduced both in Melbourne and in Sydney. In Melbourne two courses of a well-considered and comprehensive character have been held during the past few months. These courses were intended primarily for the use of returned medical officers and were largely attended by them. In Sydney no "after war" course has yet been organized, but we understand that one is under consideration and will be held in the near future. The need for a permanent organization of post-graduate work is recognized among medical educationalists, but before this idea can be carried into practice, many difficulties have to be overcome and certain opposition has to be broken down. It is sometimes stated that there is no real demand for systematized courses. The extraordinary success which attended the recent courses in Melbourne, demonstrates conclusively that it is unwise and short-sighted to wait for an insistent demand. If facilities were offered to the country practitioner at a season suitable for this purpose, a large attendance would be secured and the time and energies of the promotors of the scheme would be well rewarded.

In the United Kingdom a move has been made since the termination of the war to provide post-graduate courses for members of the medical profession. Temporary arrangements were made at all the chief teaching centres for the continued training in general and special subjects to members of the medical services. It is common knowledge that the medical officers of the American Army Medical Corps utilized these provisions somewhat to the disadvantage of medical officers of the British services. Offers were made to the members of the Australian Army Medical Corps to receive leave on full pay for a period of six months for the

purpose of attending post-graduate courses or of serving on the resident staff of some of the hospitals. Many of our medical officers took advantage of this offer and benefited considerably by the training. An inquiry was also made whether the medical officers would prefer to attend post-graduate courses in Great Britain under these conditions, or whether they would elect to return to Australia and receive the same privileges in the Commonwealth. The Department broke faith with the men who chose the latter course. It is stated that the offer was withdrawn within a short time, when the matter was referred to headquarters in Australia. Another rejoinder is that no definite offer was made. The fact remains that the offer was made and several medical officers returned to Australia to find that the Department was not prepared to grant them leave on full pay for any period and, further, that no provisions had been made for post-graduate study.

Late in 1918 the Inter-Allied Fellowship of Medicine was founded in London for the purpose of arranging post-graduate courses for medical officers of the allied armies. Lectures and demonstrations were given at all the principle hospitals on general and special medical and surgical subjects. In 1919 a Post-Graduate Association of London was formed and arrangements were made with the post-graduate schools and special hospitals in the metropolis for regular courses of study. A full description of the programme has been published in the *British Medical Journal* of April 5, 1919, p. 424. Australian practitioners seeking continuation study in London are advised to apply for information and advice to the Secretary of the Fellowship of Medicine, 1 Wimpole Street, London, W. 1.

Special post-graduate courses take place at the West London Hospital under the auspices of the West London Post-Graduate School, at the Prince of Wales's General Hospital, Tottenham, under the auspices of the North-East London Post-Graduate School, at the Dreadnought Hospital, Greenwich, under the auspices of the London School of Clinical Medicine, at the Royal Infirmary and General Hospital in Bristol, under the auspices of the University of Bristol, and at the Universities of Edinburgh and Glasgow. These courses are planned to meet the requirements of medical practitioners seeking to bring their knowledge and practice up to date.

In addition to these and other post-graduate courses proper, the several schools in the United Kingdom offer facilities to medical practitioners from other parts of the Empire for the purpose of gaining diplomas and degrees in special subjects. The Fellowship of the Royal Colleges of Surgeons is obtainable by our graduates on the same terms and conditions as are offered to practitioners in the United Kingdom. The Membership of the Royal College of Physicians of London is open to Licentiates of the College and recently a few Australian practitioners have availed themselves of the opportunity of gaining this valuable diploma, which is the necessary preliminary to the Fellowship. The diplomas and degrees in tropical medicine and in public health are obtainable by Australian practitioners willing to go through the prescribed courses.

In this place mention should be made of the fact that the Australian Institute of Tropical Medicine is intended to serve as a post-graduate training school for the purpose of imparting special knowledge in tropical diseases.

Several of the professors of the University of Paris hold post-graduate courses for French and foreign medical practitioners. Unfortunately it is necessary for the foreign practitioner to have passed the matriculation examination of the Faculty of Medicine of the University of Paris. The fees for these courses vary between two and six guineas. A certificate of attendance and of diligence is granted at the end of the course. In some cases the courses are conducted in the English language.

British students wishing to take a degree in medicine at the University of Paris may do so under the same conditions as French students or may be content to obtain the degree without the permission to practise in France as registered medical practitioners. In the latter case they are not eligible for the State diploma and cannot claim the privileges attaching to the possession of this diploma. In order to proceed to the examination for the degree of doctor of medicine without having passed the examinations for the degree of bachelor of medicine, a special application has to be made to the Minister of Public Instruction. This application must be accompanied by the diploma, certificate or degree issued by the University where the individual has studied both in the original and in translation. Evidence of the value and duration of the course of study must be produced, as well as certificates showing which stages of the course have been attended and which examinations have been passed. The application must also be accompanied by a birth certificate with a translation, or a certified copy of the same. The individual will then be granted a certificate by the Minister of Public Instruction, exempting him from attendance at classes and lectures according to the nature and duration of the studies already completed in his own country. In the case of students from foreign universities, all the examinations have to be passed. Graduates of foreign universities may obtain partial or complete exemption in regard to classes and also in regard to examinations. The fee for matriculation is £1 and the total fees for the study and examinations necessary for the degree of Doctor of Medicine is about £66.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

According to the constitution all members of the British Medical Association are members of the Division or Branch in the area of which they reside. The Australian Branches are subject to the Articles and By-laws of the Association, but have the right to determine the rate of subscription payable for membership. In New South Wales the members of the Branch are simultaneously members of a company incorporated under the *Companies Act*. The constitution of this Company coincides with that of the parent Association. In Victoria the members of the Branch are simultaneously members of the Medical Society of Victoria, which has a similar constitution.

The annual subscription of members of the New South Wales Branch is £4 4s.. Members of less than three years' standing as registered medical practitioners, members who have retired from medical practice and members who are over 70 years of age, pay £2 2s.. Members who are permanent whole-time members of the public services of the Commonwealth or of the State, including the University of Sydney, pay £3 3s. if they are of not less than three years' standing as registered medical practitioners.

The annual subscription of the Victorian Branch is three guineas for members in the Metropolitan area, two and a half guineas for members in the country areas and two guineas for members of less than two years' standing as registered medical practitioners.

The annual subscription of the Queensland Branch is £3 18s. 6d. for members in Brisbane, and £3 8s. 6d. for members in other parts of the State. Members of less than five years' standing as registered medical practitioners pay £2 17s. 6d. in the town, and £2 7s. 6d. in the country. Members holding positions as resident medical officers at public hospitals, provided that they are of less than three years' standing as registered medical practitioners, pay £2 5s..

The annual subscription of the South Australian Branch is £3 for metropolitan members, £2 15s. for country members and £2 2s. for members absent from the State.

The annual subscription of the Western Australian Branch is three guineas; junior members pay two guineas.

In the Tasmanian Branch the annual subscription is three guineas. No concessions are granted to junior or other members.

MEDICAL OFFICERS' RELIEF FUND (FEDERAL).

The Trustees acknowledge with thanks the receipt of the following donations and promises towards the above-named Fund:—

(FIFTEENTH LIST.)

New South Wales.

	£	s.	d.
South Sydney Medical Association	20	0	0
"C"	20	0	0
Dr. A. H. Rutherford	10	10	0
Queensland.			
Dr. F. C. Turnbull	10	0	0

Total to March 23, 1920, £11,567 18s. 10d..

The Medical Journal of Australia.

SATURDAY, MARCH 27, 1920.

The Practice of Medicine.

The present issue of *The Medical Journal of Australia* is entirely devoted to medical education and cognate subjects. As far as we are aware, no attempt has hitherto been made to present to the medical practitioners of Australia in a concrete form information concerning the preparation for medical practice and the various channels open to medical practitioners. The calling is a noble one, for its aims are the alleviation of suffering, the prevention and cure of disease, the maintenance of good health and the establishment of a healthy race. Not every one is naturally fitted, either by temperament, by mental ability or by social instinct, to become a useful member of the profession of medicine. It is a fundamental error on the part of parents and guardians to select this profession for their sons or daughters in the absence of a definite aptitude and inclination. At times it is difficult to determine whether the individual will be suitable for the calling or the calling for the individual. Not infrequently the student discovers for himself or herself during the short years of student life that the selection has been unwisely made. In these circumstances it would be advisable to relinquish the attempt, for success in a professional sense will not be attained and the medical profession should not be utilized as a means of earning money, unless the practitioner is able and willing to return work of a high standard for the remuneration he claims.

Medical practitioners are brought into very intimate relations with their patients. They receive implicit trust and are regarded as true friends and advisers. Every medical practitioner is supposed to have a profound knowledge of the structure and functions of the human body and of the nature of the ills that affect the body. It is an immense responsibility to undertake the care of a human being in disease. For these and many other equally obvious reasons the medical practitioner should be possessed of a sound general education; he should be gentle, sympathetic, of good address, refined and accommodating. He must hold the trust imposed in him by his patients as sacred. His integrity must be beyond doubt. In his professional dealings with his colleagues, he should respect the strictest code of ethics. He must be prepared to efface self and to work extremely hard without murmuring. He must realize that his patient has a right to expect him to keep his knowledge up-to-date, by no means an easy task. He must give his best services on all occasions and to all persons, irrespective of the pecuniary reward that may await his labours. To anyone with the qualities essential for the tasks of medical practice, the profession has many and great advantages to offer. The doctor can claim a good social status as a man of education and refinement and he has within his reach social intercourse suited to his tastes and position. His life is full of interesting incidents, of opportunities for broadening his outlook and of changes of activity. He has no monotonous routine to perform; no dull grind at one task from morning till night. His long hours are relieved by the variety of his experience, by the new problems that present themselves for solution. His disappointments and disasters merely spur him to exercise greater skill and more active vigilance. His successes and achievements are attended by the consciousness of a duty well performed. He has limitless opportunities to do good and at the end of his life he should be able to rejoice that he has used his gifts and education for the benefit of humanity.

The qualities required in the student include, in addition to those already indicated, certain aptitudes that cannot be acquired. A knowledge of languages is desirable. A medical practitioner should understand his own language. He should also be able to express his thoughts in spoken and written words. It is singular that the ability to interpret sentences is by no means infrequently absent in persons claiming to be well educated. The prospective medical practitioner should have a proclivity for natural sciences. A sound knowledge of mathematics, a quick understanding of the principles of physics and chemistry and the instinct to enable him to make things neatly are indispensable. During the whole course of his professional life he will be required to recognize the things he sees, hears, feels, smells and tastes. In other words, the power of observation is the most

valuable quality for a medical practitioner. The gift of accurate observation is a rare one, but it is priceless to those who possess it. There is no better test of suitability for medical study than that of requiring the individual to describe in his own words some object in nature. For the rest the usual attributes of intelligence, a quick wit, a good memory, a determination to achieve success and, above all, a recognition of the actual ignorance of even the best informed man are among the most important qualities.

The medical profession has traditions and dignity to preserve. No one should enter its portals unless he is prepared to recognize these traditions and contribute to the honour and dignity of the profession. The student should face the future with a full consciousness of what is expected of him. If he undertakes the trust, he must fulfill his obligations. His life must be spent in earnest study and he must remain a student all his days. He must lead a blameless life and remember that social flaws will reflect discredit on a noble profession. Ignorance of the facts that have been discovered is unpardonable. Carelessness and neglect are heinous sins in a medical practitioner. A man with a hard, commercial mind is unfitted for this calling. The medical practitioner must be to some extent, at all events, altruistic and his life must be governed by ideals. A competent person who is prepared to throw his whole energy into the business of his calling, and who possesses natural aptitude, will find no difficulty in reaping a good harvest. His best reward, however, will be the satisfaction of duty performed.

THE BRITISH MEDICAL ASSOCIATION.

A great deal of valuable information is contained in the first three articles of this number concerning the curriculum of medical education and the facilities provided for students at the schools of medicine of our Australian universities. Parents hesitating whether they will select medicine as a calling for their sons and daughters, young men and women making the choice of a profession, medical students and medical practitioners will find these articles of interest and will join us in expressing our cordial thanks to the Deans of the Faculties of Medicine of the three Universities for having carried out the task so admirably. It should be the continued aim of every Australian to support our own universities in the endeavour to create an Australian medical profession. The articles demonstrate clearly and unmistakably that the education accorded to medical students within the Commonwealth is second to none in the world. The schools are large and expansive enough to produce a sufficient number of medical graduates for the needs of the Australian people. There is no longer any need to seek men in the old country to reinforce the ranks of the profession. The fact that our own graduates frequently seize the opportunity of visiting the European centres of education will suffice to keep our ideas up-to-date and to prevent the ties of Empire from becoming loosened. Medical practitioners eligible for registration in the United Kingdom are entitled to be registered in any State of Australia. In addition, there is a further bond uniting us to the old country. The medical profession here has adopted the traditions and the ethical standards of the medical profession in the United Kingdom. The body representative of the medical profession on the other side of the world has spread its embracing arms over thirteen thousand miles and exists here with the same functions, the same aims and the same obligations. In addressing the future medical practitioners of Australia, we recognize the necessity of urging one and all to enrol as members of the British Medical Association as soon as they are eligible. We may be asked: What is the British Medical Association? What are its aims? And how does it carry out its objects?

In the year 1832 a general practitioner of Worcester, named Charles Hastings, founded a society of medical practitioners, The Provincial Medical and Surgical Association, for the collection of useful information, for the increase of knowledge of medical topography, for the investigation of the modifications of endemic and epidemic diseases, for the advancement of medico-legal science and for the maintenance of the honour and respectability of the medical profession. Out of small beginnings this society grew and spread until it lost its initial provincialism and became the leading medical society in the United Kingdom. The name was changed to that of the British Medical Association. In 1874 it

was incorporated under the *Companies Act* as a company conducted not for profit. Its aims, as set out in the Memorandum of Association, are the promotion of medical and the allied sciences and the maintenance of the honour and interests of the medical profession. In 1901 the constitution of the Association was radically altered to admit of more democratic government. The local units of the Association are called Divisions and every member residing in the area of a Division automatically becomes a member of that Division. A single Division or a group of Divisions constitute a Branch of the Association. The government of the Association is vested in the Representative Body, consisting of representatives of the Division. In some instances, when the Division is coterminous with the Branch, the term Division is not used, but for the purpose of representation on the governing body of the Association, these Branches have all the powers and functions of Divisions. The executive of the Association, called the Council, is composed of *ex officio* members, members elected by Divisions or groups of Divisions and members elected by the Representatives. The Memorandum of Association defines the means that may be adopted to carry out the objects of the Association. In the year 1905 steps were taken to extend the powers and to render the machinery of the British Medical Association more pliable. The fact that the Association could not use its funds for the purposes of medical benevolence, that it could not provide facilities for the sale or transfer of medical practices, that it could not act as trustee, that it could not promote and support the candidature for membership of any British legislature and that it could not use its funds for the defence of persons in civil or criminal proceedings in which it was held that the honour and interests of the medical profession were involved, were regarded as defects in the organization. An application was made for the granting of a Charter which would enable the Association to do all these things. Owing to certain opposition, this application was unsuccessful, but the powers of the Association were eventually extended in many of these directions by alterations in the Memorandum of Association. It should be mentioned in this place that a small minority of members have on a few occasions sought to obtain powers to enable the Asssociation to become a trade union. The majority have resisted these importunate demands and it is not within the constitution of the British Medical Association to utilize a penny piece of its moneys for any purpose connected with trade unionism.

The Presidential Badge of the Association is suspended on a collarette consisting of links bearing the words Great Britain and Ireland, Canada, Africa, India, Australia, New Zealand and West Indies. The word Australia occupies the position to the right of the shield beneath the word Great Britain. In Australia the British Medical Association comprises six Branches, which are constitutionally Divisions of the Association. Each Branch has the privilege of separate representation in the Representative Body, while groups of Branches nominate a representative for election to the Council. In addition, there exists a Federal Committee of the Branches in Australia. This Committee has the function of co-ordinating the activities of the several Branches, but has no power of initiation. When matters arise affecting the medical profession within the Commonwealth as a whole, they may be referred to the Federal Committee by the Branches. The actions of the Federal Committee are guided by the wishes of the members as expressed in resolutions of the several Branches. The Branches have a considerable degree of autonomy and exercise in an active manner the powers vested in them in connexion with the honour and dignity of the medical profession, with matters of medico-political and medico-ethical importance and with the promotion of the public health. The machinery is used for the advancement of scientific work and for the interchange of opinion on professional subjects.

It has been found necessary in the Commonwealth to form subsidiary organizations for particular purposes, so that the interests of the members might be better served. Special companies have been formed to hold property. The homes of the Branches are in some cases held in this manner. Benevolent funds have been organized and placed in the keeping of trustees who are members of the British Medical Association in Australia. The official organ of the Branches of the British Medical Association in Australia is the property of a company whose members are necessarily members of the Association. In Vic-

toria a medical agency is conducted by an affiliated society. It thus appears that the British Medical Association in Australia, either directly or indirectly, fulfils very important functions. On January 1, 1920, there were 2,896 members of the British Medical Association in Australia. Included among this number are the leaders of the medical profession, the teachers in our medical schools and the holders of the most important medical positions in the public services. The British Medical Association has performed invaluable services in connexion with the war; it has undertaken many important duties at the request of the Federal and State Governments and has proved itself indispensable for the co-ordination of the work of the medical profession. In the future its activities will expand and already it is taking a leading part in the extension of public health activities and of preventive medicine. The recognition it receives from Ministers and others in position of authority depends on the reputation of its members, on the fact that its considered opinions are the result of careful deliberation by experts and on its representative character. It is a powereful organization, not because it commands a large number of political votes, but because every member is an educated individual and demands only that which is for the benefit of the community of Australia.

MEDICAL REGISTRATION.

Medical practitioners in the Commonwealth have to become registered in the State in which they desire to practise. It has long been felt that it would be desirable if medical registration could be transferred to the Federal authority, so that the need for repeated registration when the practitioner moves from one State to another, would be obviated. The Federal Government, however, does not possess the necessary legislative power and it is doubtful whether the Governments of the several States would surrender their sovereign rights in this regard. In the absence of a single medical act for the Commonwealth, attempts have been made to secure State legislation of a uniform character. Hitherto this attempt has not been successful, although some improvement has been effected within recent years. It will be recognized that the standard of efficiency of medical practice will be governed by the conditions of registration. The aim of the British Medical Association in Australia is to admit those who possess medical degrees of the Australasian universities or degrees or diplomas entitling the holder to registration in the United Kingdom. In addition, it is held that practitioners from foreign countries should be granted admission to the Australian medical registers if similar privileges are granted in that country to Australian practitioners, provided that the course of study is of equal duration and the examinations are of equal severity as the courses and examinations prescribed in the Commonwealth.

Fees for Registration

In Victoria a fee of five guineas is required to be paid on application for registration. A further fee of five shillings is charged for the registration certificate.

In South Australia there is an annual registration fee of one guinea. Medical practitioners, however, may pay the sum of five guineas either at the time of registration or subsequently as a commutation of all renewal fees.

In Tasmania there is a registration fee payable of three guineas.

Qualifications for Registration.

It will be seen from the following that there is no uniformity in regard to the qualifications entitling medical practitioners to be registered in the several States. For the sake of clearness the provisions contained in the six Acts are set out in tabular form.

The following persons are entitled to be registered in the respective State:—

New South Wales.

(*i.*) Graduates of Australian universities.

(*ii.*) Graduates of universities in the United Kingdom.

(*iii.*) Diplomates of the recognized medical corporate bodies in the United Kingdom, entitled to registration in the United Kingdom.

(*iv.*) Persons who are or have been appointed medical officers in His Majesty's sea or land services.

(*v.*) Persons entitled to practise in a foreign country which has entered into reciprocal arrangements with Australia in this regard; provided that they have passed through a course of study of not less than five years' duration.

(*vi.*) Persons who have passed through a course of study of not less than five years' duration in a foreign country and are entitled to practise in that country, and who pass an examination prescribed by the Senate of the University of Sydney.

No person who is a German or Austrian subject, or who possesses a German or Austrian degree only, can be registered.

Victoria.

(*i.*) Graduates of the Australian universities.

(*ii.*) Graduates of British or foreign universities, who have passed through a course of study of four years' duration.

(*iii.*) Persons registered or entitled to be registered in the United Kingdom.

Queensland.

(*i.*) Graduates of the Australian universities.

(*ii.*) Persons who have passed through a course of study of three years' duration, who have passed the examination prescribed in the country in which they have studied, and who are entitled to registration in that country.

(*iii.*) Persons who are or have been duly appointed medical officers in His Majesty's sea or land services.

South Australia.

(*i.*) Graduates of a university in Australia or New Zealand.

(*ii.*) Persons registered or entitled to be registered in the United Kingdom.

(*iii.*) Persons who have passed through a course of study of five years' duration in a foreign country, provided that the standard is not lower than that recognized in South Australia, and who have received a degree or diploma and are entitled to be registered in that country, provided that equal rights are granted to persons registered under the South Autsralian Act in that country.

Western Australia.

(*i.*) Graduates of the universities of Australia.

(*ii.*) Persons entitled to registration in the United Kingdom.

(*iii.*) Graduates of British or foreign universities who have passed through a course of study of not less than three years' duration.

Tasmania.

(*i.*) Graduates of all British universities.

(*ii.*) Persons entitled to be registered in the United Kingdom.

(*iii.*) Persons who are medical officers in His Majesty's sea or land services.

(*iv.*) Graduates of a medical college of Class "A" in one of the States of America, provided that they have passed through a course of study of four years' duration and have received a degree or diploma from that college and provided that they hold a certificate or licence entitling them to practise in one of the States of America.

Some Proposals for the Reform of the System of Medical Education.

The following report is the result of a careful study of the existing conditions of medical education in Australia, of the defects attaching to these conditions and of the demands made on the modern medical practitioner. As will be seen from the text, the signatories met at the invitation of the Editor of *The Medical Journal of Australia* on very numerous occasions. The curriculum was drafted with great care and was subjected to severe criticism before being finally adopted. The report has been submitted to the Deans of the Faculties of Medicine of the Universities of Sydney, Melbourne and Adelaide, for their consideration.

No special provision has been made for training in military and naval medicine. It will be seen, however, that for those who desire to undergo this special training, sufficient time is available in the later terms of the course. It will be seen that the number of hours devoted to systematic lectures and to systematized demonstrations, practical work and theoretical study are very materially reduced in comparison with the number of hours occupied in this way at present.

The curriculum is built up on a new conception and is consequently very different from any of the existing curricula. If the principle be accepted that all medical knowledge is based on an understanding of chemical, physical or vital processes, little difficulty will be experienced in favouring the Edinburgh idea of continuing the study of chemistry and physics throughout the whole course. The curriculum, as drafted, follows logically on the acceptance of this principle.

Finally, we would point out that the introduction of living demonstrations in the out-patient department and elsewhere should not be regarded as an anticipated clinical teaching, but should merely serve to render the lessons taught in the anatomical or physiological departments more interesting and more readily comprehended by the junior student.

Report.

(I.) Introduction.

A system of medical education should be adapted to the state of medical knowledge at any given epoch. This necessitates a revision of the curriculum from time to time and a complete reconsideration of the existing system at longer intervals. It is the opinion of many authorities that the additions to our knowledge of medical sciences since the present system was devised have been so numerous and so extensive that nothing short of a profound modification of the curriculum would suffice to meet the present-day needs. In these circumstances the Editor of *The Medical Journal of Australia* invited us to meet him in conference for the purpose of examining the whole question of medical education. We have considered the subject at first in general perspective and later in great detail and have endeavoured to formulate the principles on which a reconstructed curriculum should be founded, having regard to the financial and other limitations existing at the present time in the Australian Universities.

It appears to us that it would be to the disadvantage of the medical profession and consequently of the public were an attempt made now to conserve the major part of the existing scheme. We have therefore not hesitated in recommending extensive reforms, which appear to us to be essential for the progressive development of the medical profession. In taking this position we were supported by the opinions expressed by the members of the Edinburgh Pathological Club. The proposals put forward in the report of the Club on medical education have been weighed with care and we have attempted to ascertain how far each of these proposals would be applicable to Australian conditions.

(II.) The Aims of Medical Education.

The amount of knowledge that the medical student must acquire at present is so considerable that great economy of time and careful arrangement is needed to enable him to complete his studies within five years. While we recognize the desirability of the possession of a wide general education for a medical practitioner, we find that extra-medical subjects must be taught before the student enters the medical school, in order that he may devote his whole time to medical sciences after matriculation. The education of the medical student will remain unsatisfactory unless a concurrent reform in school education is effected. We consider that the scholar destined to enter the medical profession should be required to study natural sciences as well as English, mathematics, modern languages and classics.

Our existing methods involve, in the first instance, the education of the medical student in the preliminary scientific and professional subjects in the abstract; at a later date he is taught to recognize disease, to study its nature and to equip himself with knowledge concerning its treatment. This system, divided, as it were, into water-tight compartments, has tended in practice to the substitution of a preparation for examinations at the end of each period of study for a process of real education. Moreover, the examinations have tended to become narrowed into a stereotyped test of memory of facts and accepted theories rather than a test of the power of the candidate to think for himself and to develope the habit of scientific inquisitiveness.

Furthermore, examinations should be used merely as a test of the intelligence and knowledge of the student at the various stages of his course. It should be impressed upon the student that his education does not end when he passes his final examination. After he has proved his ability to learn and to reason and his competence to apply knowledge to practical use, he should be required to spend a year as a resident medical officer at some recognized hospital, where his application of the knowledge acquired during his student days can be guided and criticized by experienced members of the medical staff. This period of study should be regarded as a necessary part of the medical education of the practitioner and should be a condition precedent to graduation.

(III.) The Fundamental Sciences.

In the past certain subjects have been taught without sufficient reference to their application in preventive or curative medicine. This system is wasteful and should be discarded. From the time when the student enters the medical school, everything should be taught in its relation to medicine. The student should be shown the uses to which knowledge in biology, embryology, anatomy, physics, chemistry and physiology are applied in medical practice.

For this reason it is desirable that every teacher in the medical school should have qualified as a medical practitioner. A biochemist or a physiologist who has not been trained as a medical student, cannot appreciate the problems with which the medical practitioner is called upon to deal. The most skilful physicist will not direct the study of medical students in physics to the utmost advantage, because he has no practical knowledge of the application of physical phenomena to medical science.

In the next place, it is necessary to recognize the importance of continued study of the fundamental sciences throughout the medical course, in order that the practical significance of each chapter of these sciences may not be missed. Thus if the student does not enter the chemical laboratory after the first year, he will have forgotten the greater part of what he has learned of organic chemistry by the time he is ready to study the disturbances of metabolism. Again, the value of a well-designed course in the anatomy of the nervous system or in the physiology of the special senses is considerably diminished if a prolonged period is allowed to elapse before the clinical application of this knowledge is made to the study of affections of the brain, spinal cord and nerves.

The fundamental sciences on which medicine is based are chemistry, physics and biology. These sciences should be taught in combination with the practice of medicine, surgery and preventive medicine. More intelligent interest will be taken in the early work if the student is shown the bearing the knowledge he is acquiring has to the practice of medicine. For example, if, at the time when he is studying osteology, the student were shown patients with fractured

bones he would understand the practical importance of a knowledge of the attachments of muscles and of the direction of displacement of the fragments. This could be carried out by requiring the student to attend the out-patient department, or even the wards, early in his course. We would, however, point out that the clinical teaching should be strictly limited to the lesson in hand. While the student is learning osteology, he should be shown patients with fractured bones, but it would be useless to introduce at this stage any instruction on the surgery of fractures.

In the next place, we are of opinion that instruction by demonstration and practical work is more advantageous and of greater didactic value than the systematic lecture. Consequently, we recommend a reduction in the number of systematic lectures to a minimum.

It should be recognized that progress in medicine results from the application of scientific methods of investigation to the problems of medicine. The value of research work depends on the capability of the individual to observe and to apply methods of original thought. The spirit of research should be stimulated in every student, partly by encouraging him to come into intimate contact with those conducting research work and partly by giving free scope to an intelligent exercise of his imagination.

(IV.) The Ultimate Sciences.

The ultimate sciences are medicine, surgery and preventive medicine. In the past the student has been taught to study disease largely with the object of treating it. It has become apparent that the prevention of disease is at least as important as its cure. Considerable progress in prophylaxis has been achieved within recent years and it is now held that the general subject of preventive medicine should be given prominence in the medical curriculum, equal to that accorded to curative medicine and surgery. All other branches of medical science are sub-groups of these main subjects.

Instruction in medicine should be made to correspond as closely as possible to the teaching of the fundamental sciences. The special subjects of pathology, bacteriology, hæmatology, etc., should be fitted into the scheme in their logical positions.

Similarly, instruction in surgery should be made to correspond to the teaching in the fundamental sciences and a system of co-ordination between the course in medicine and the course in surgery should be devised. The same applies to instruction in preventive medicine.

(V.) The Responsibility for the Integral Parts of the Course.

Medical education will continue to suffer if the existing scheme of independence of the integral parts is maintained. The principle should be recognized that in each special department one teacher or professor should be responsible for the nature of the instruction imparted. This responsible teacher should be supported by well-equipped members of the staff, who should be required to conform to the plans evolved by him. There should be close co-operation between the responsible teachers. The classes, lectures and demonstrations should be so arranged that the student would find his course planned economically, as far as time and energy are concerned. This system of co-ordination must be based on a mutual understanding between the several teachers and should render it impossible for an individual professor to disturb the smooth working of the curriculum in an endeavour to suit his own convenience or to embarrass his teaching colleagues.

There should be the following professors, whose titles should correspond to the revised scheme:—

(*a*) *Fundamental Sciences.*
- (*i.*) Professor of Medical Chemistry (Bio-chemistry).
- (*ii.*) Professor of Medical Physics (Physiology).
- (*iii.*) Professor of Anatomy (including Zoology).

(*b*) *Ultimate Sciences.*
- (*iv.*) Professor of Medicine.
- (*v.*) Professor of Surgery.
- (*vi.*) Professor of Preventive Medicine (including Hygiene, Sanitary Science and Epidemiology).

In addition, there should be a—
- (*vii.*) Professor of Pathology (including Morbid Anatomy).
- (*viii.*) Professor of Bacteriology (including Immunology).
- (*ix.*) Professor of Pharmacology (including Therapeutics and Materia Medica).

Each of these professors should have a full staff of assistants. Some of the teachers would carry out their duties in the hospitals recognized by the medical school for the purpose. The teachers engaged in hospital practice should be appointed by a conjoint board, consisting of university and hospital representatives. Arrangements should be made with the boards of management of all the large hospitals in the capital cities whose universities contain medical schools for the utilization of these institutions for teaching purposes.

(VI.) The Curriculum.

In the following a curriculum is submitted in which the principles enunciated above are embodied:—

The following summary of the re-arranged curriculum will reveal at once the gain to the student.

Number of Hours, Arranged in Terms.

Year.	First Term. Hours.	Second Term. Hours.	Third Term. Hours.	
1st	190	235	255	Examination
2nd	230	200	160	Examination
3rd	225	205	180	Examination
4th	165	120	100	Examination
5th	95	75	50	Examination
6th	Examination			

The full curriculum is set out below.

(VII.) Examinations.

The re-casting of the curriculum necessarily involves a modification of the general plans on which the examinations are conducted. We are of opinion that a test examination should be held at the end of each year's study, to determine the ability of the student to pass on to more advanced work. The examination should be limited to the subjects actually taught during the three preceding terms, but the examiners should be influenced to a great extent by the capacity of the student to grasp general principles, to apply them to specific problems and to initiate original conceptions and also by the record of his year's work. The powers of correct observation should be tested.

Should the candidate fail to satisfy the examiners that he has mastered the year's work in a sufficiently thorough manner, he should be referred for a period of three months. Should he fail to pass the test on a second occasion, he should be required to repeat the whole course of instruction. The student should not be allowed to present himself more than four times for examination in the subjects taught in any one year.

The final examination should take place at the end of the first term of the sixth year.

(VIII.) Conclusion.

In commending this reconstructed curriculum to the Australian universities, we would urge the necessity of a frank recognition of the principles set out above. The changes involved are, no doubt, of a drastic character, but it appears to us that these, or other changes equally revolutionary, are inevitable in the near future. We hold very strongly, after due consideration of all the attendant circumstances, that the time is ripe for such a change. The establishment of fundamental departments and of ultimate departments is logical and coincides with the requirements of modern medicine. Our medical schools should be institutions for the education of men and women. The work should be carried out in a progressive spirit and ample provision should be created for original research, in order that our own graduates may contribute to the stock of medical knowledge for the benefit of mankind and for the enhancement of the reputation of the Australian schools of medicine.

Curriculum.

Year.	First Term.		Second Term.		Third Term.	
	Subject.	Hours.	Subject.	Hours.	Subject.	Hours.
I.	(i.) General Cytology (Plant and Animal), Inheritance and Embryology	20	(i.) Zoology (Vertebrate and Invertebrate), Practical	40	(i.) Human Histology (Practical and Theoretical)	40
	(ii.) General Morphology (Vertebrate); Second Half of Term, to Follow Cytology	25	(ii.) Descriptive Zoology (invertebrate) and Embryology	25	(ii.) Anatomy (Introduction), Human, and Embryology	30
	(iii.) Histology, Vertebrate (Practical and Theoretical)	40	(iii.) Applied Physics	25	(iii.) Dissections	120
	(iv.) Elementary Physics	40	(iv.) Practical Physics	40	(iv.) Applied Chemistry, Organic—	25
					Lectures	25
					Practical	40
	(v.) Chemistry, Inorganic—		(v.) Applied Chemistry—			
	Lectures	25	Lectures	25		
	Practical	40	Practical	40		
			(vi.) Botany—			
			Lectures	20		
			Practical	20		
					Examination	
II.	(i.) Bio-physics	10	(i.) Physiology, Excretions and Respiration	20	(i.) Bio-Chemistry	40
	(ii.) Physiological Physics	40	(ii.) Experimental Physiology	40	(ii.) Dissections	120
	(iii.) Physiology, Circulation, Locomotion and Temperature	30	(iii.) Descriptive Anatomy	20	(iii.) Hospital	—
	(iv.) Descriptive Anatomy	30	(iv.) Dissections	120		
	(v.) Dissections	120	(v.) Hospital	—		
					Examination	
III.	(i.) Physiological Chemistry (Practical and Theoretical)	20	(i.) Regional Anatomy	25	(i.) Diseases of Alimentary Tract—	
					(a) Medicine	25
					(b) Surgery	25
	(ii.) Physiology, Digestion	20	(ii.) Medicine	25	(ii.) Morbid Anatomy	50
	(iii.) Pharmacology—		(iii.) Surgery	25	(iii.) Materia Medica	20
	Lectures	20				
	Practical	20				
	(iv.) Dissections	120	(iv.) General Pathology (Practical and Theoretical)	50	(vi.) Bacteriology (Practical and Theoretical)	50
	(v.) Introduction to Medicine and Surgery	25	(v.) Surgical Anatomy, Clinical	20	(v.) Junior Operative Surgery	10
	(vi.) Hospital	—	(vi.) Pharmacology—		(vi.) Hospital	—
			Lectures	20		
			Practical	20		
			(vii.) Materia Medica	20		
			(viii.) Hospital	—		
					Examination	
IV.	(i.) Anatomy, Brain	25	(i.) Chemistry of Foods (Practical)	20	(i.) Pathological Chemistry	30
	(ii.) Physiology of Nervous System	10	(ii.) Dietetics	10	(ii.) Physiology of Feeding (Infants)	5
	(iii.) Hæmatology (Practical and Theoretical)	30	(iii.) Immunity	25	(iii.) Medicine, Children	10
	(iv.) Pathology of Special Organs	100	(iv.) Medicine	25	(iv.) Obstetrics	50
	(v.) Hospital	(185)	(v.) Surgery	40	(v.) Anæsthetics	5
			(vi.) Hospital	(245)	(vi.) Hospital	(250)
					Examination	
V.	(i.) Anatomy and Physiology of Special Senses	30	(i.) Chemistry of Drugs and Poisons	10	(i.) Epidemiology	10
	(ii.) Clinical Chemistry (Practical)	10	(ii.) Hygiene, Drainage, Water Supply	20	(ii.) Psychology	10
	(iii.) Diseases of Ear, Nose, Throat and Eye	20	(iii.) Preventive Medicine	10	(iii.) Psychiatry	10
	(iv.) Dermatology	10	(iv.) Forensic Medicine	10	(iv.) Therapeutics	20
	(v.) Gynæcology	25	(v.) Clinical Demonstrations in Neurology, Cardiology, etc.	25	(v.) Hospital	(300)
	(vi.) Senior Operative Surgery (Demonstrations at Hospital)	—	(vi.) Hospital	(275)		
	(vii.) Hospital	(255)				
VI.	Qualifying Examination					

The biology in the first term of the first year is introductory and general. The standard of the course in physics will become more advanced when this subject is better and more generally taught prior to matriculation. The student should be taught chemistry, with a view to its ultimate adaptation to physiology and the other subjects of the curriculum.

By the term applied physics is meant the application of physical principles to general phenomena, such as the statics of position, the dynamics of locomotion, the physical phenomena of osmosis and so forth. By the term applied chemistry is meant the application of chemical principles to the requirements of the curriculum.

In the second year bio-physics includes the application of physical phenomena to living processes. Bio-chemistry in the third term is intended to serve as a connecting link between physiology and physiological chemistry.

The entry "hospital" in the second and third term of the second year implies attendance from time to time at hospital for special demonstration on such subjects as the physiology of circulation, locomotion, temperature, excretions, etc., and fractures, dislocations, etc., in their physiological and anatomical, but not clinical, aspects. The time available for these occasional visits to the hospital will be limited to the difference between the number of hours set out and a maximum of 350 hours.

The number of hours spent at hospital increases during the third year, term by term. The lecturers in medicine, surgery and pathology will co-operate with each other and with the clinical teachers. The figures in parentheses opposite the entry hospital indicate the maximum number of hours available for clinical work.

(Signed) ARCHIE ASPINALL,
H. G. CHAPMAN,
J. L. McKELVEY,
HAROLD J. RITCHIE,
F. P. SANDES,
S. A. SMITH.

The Public Service.

PUBLIC HEALTH.

The opportunities for a successful and satisfactory career in preventive medicine for the young graduate are becoming more numerous, both in the diversity and class of work available and the number of positions to which appointments can be made. The range of salary, also, is gradually becoming more attractive.

The principal fields of work, together with the positions available are incorporated hereunder.

Commonwealth Government.

QUARANTINE SERVICE.

(a) Administrative Section.

The administrative section is controlled by the Director of Quarantine at a salary of £1,200 per annum. There are four whole-time Chief Quarantine Officers, the salary attaching to this grade having been fixed at from £750 to £950 per annum, the salary advancing by instalments between these limits. A Chief Quarantine Officer is responsible for the administration of the *Quarantine Act* and other functions of the Quarantine Service within his State. One permanent position exists in Queensland, New South Wales, Victoria and Western Australia respectively.

The position of Chief Quarantine Officer in South Australia is a part-time one.

All new appointments to the grade of Chief Quarantine Officer involve the possession of the Diploma of Public Health.

There are ten positions of Quarantine Officer at a commencing salary of £504, advancing to £678. These positions carry appointment at various places around the Australian coast, transfers being effected so as to prevent unduly long residence at a position in the tropical zone.

Graduates occupying the position of Quarantine Officer are encouraged to take the course for Diploma of Public Health and facilities are provided for this purpose. Arrangements have been made with the University authorities so that the necessary training may be provided at Brisbane, Adelaide and Perth for officers stationed at those places.

All positions are permanent ones under the *Public Service Act.*

(b) The Serum Laboratories.

This department of the Quarantine Service is presided over by a Chief Quarantine Officer, Laboratory Division, whose range of salary is the same as the Chief Quarantine Officer grade in the administrative section.

There is also an Assistant Bacteriologist of Quarantine Officer grade.

The Quarantine Service is constituted under the *Quarantine Act.* Its principal function is the administration of maritime quarantine duties, but, in addition, such public health functions as are required by the Commonwealth Government are carried out by this service. The control of the staff is vested, by the *Quarantine Act,* in the Director of Quarantine subject to the general provisions of the *Public Service Act.*

The qualifications usually required for positions in the Service are, on entering the service, an age between 25 and 35 years and a reasonably good University career; the subsequent advancement within the service being dependent upon the possession of Diploma of Public Health and definite evidence of administrative ability and devotion to duty.

For the medical positions in the Serum Laboratories, laboratory experience and evidence of special capability for this class of work are required.

Hookworm Campaign.

This campaign is being conducted conjointly by the International Health Board of the Rockefeller Foundation, the Commonwealth Government and the various State Governments concerned. The campaign is devoted to the detection and eradication of hookworm wherever it exists in Australia and local operations are now being conducted in Queensland, New South Wales and Victoria.

The Director is appointed by the International Health Board on account of his special experience in this class of work. There are five medical positions at a salary of £700, with prospects of advancement beyond that salary on evidence of satisfactory service.

The campaign is being controlled by a central committee appointed by the Commonwealth Government and an executive committee in each of the States concerned, with representatives of the Commonwealth Government, the State Government and the International Health Board. The funds are provided by the International Health Board, the Commonwealth Government and the State Government concerned, in equal proportions.

State Public Health Services.

The positions available in the State Public Health Service may be classified as follow:—

New South Wales.

Director-General of Public Health at £1,200 per annum; Deputy Director and Senior Medical Officer £900; Medical Officer of Health, Combined Metropolitan Districts, £790 to £800; Medical Officer of Health, Hunter River District, £700; Assistant Medical Officer to the Government £610 to £650; Principal Microbiologist £800; Assistant Microbiologist £610 to £650; Junior Assistant Microbiologist £400 to £600.

These positions are all appointments under the *Public Service Act.*

Victoria.

Chairman, Board of Health, £800; one Medical Inspector £600 to £650.

Both of these positions are appointments under the *Public Service Act.*

Queensland.

Commissioner of Public Health £800; Health Officer £650; Medical Officer, Venereal Diseases, £650; Director, Microbiological Laboratory, £650 to £700.

All of these appointments are ministerial appointments, not coming within the range of the *Public Service Act.*

South Australia.

Chairman, Central Board of Health, £750. This position is an appointment under the *Public Service Act.*

Western Australia.

Commissioner of Public Health, £800 to £1,050; Bacteriologist, £672 to £804; Medical Officer of Health, £672 to £804.

These three positions are appointments under the *Public Service Act.*

Tasmania.

Chief Health Officer £700 to £800; Assistant Health Officer £500 to £600.

Both of these positions are appointments under the *Public Service Act.*

In all of the State Public Health Services, the duties are defined under the *Public Health Act,* the control of the staff being vested in the head of the Department and promotion being dependent upon the occurrence of vacancies.

Municipal Appointments.

In addition to the above, there are two whole-time municipal appointments—those of the Medical Officers of Health, City of Melbourne and City of Adelaide—and numerous part-time appointments, each city, town and municipality or other local governing body being required to appoint a medical officer of health. Generally, the salaries attached to these positions are small, the service required being part-time and occasional.

THE SCHOOL MEDICAL SERVICE.

The medical control of school children has developed out of two distinct social movements of modern times. The first is the recognition of the rights of children. In Great Britain compulsory education was introduced in 1871 and the legislation dealing with children may be regarded as mid-Victorian. The second is the idea of prevention of disease as a practical health measure. In 1882 Dr. Clement Dukes, of Rugby, was appointed a school medical officer. For a time he was the only one in Great Britain. As he is still alive, the newness of the movement is very apparent. The success of his work soon found recognition and the Board of Education, as well as the Education Branch of the London County Council started on an extensive campaign about 18 years later. The growth of the service has been remarkable. From the last annual report of the Chief Medical Officer of the Board of Education, Sir George Newman, now in the Ministry of Health, it is seen that there are 869 school medical officers undertaking the medical inspection of school children. In addition, no less than 504 specialists, including 173 ophthalmic surgeons, 29 aural surgeons, 251 dentists, 27 radiologists and 24 anæsthetists, are engaged in this work. Of the 1,373 medical officers, 137 are women. There are 90 whole-time officers.

As the work of the medical inspectors was being evolved, the application of general measures of amelioration was introduced and certain institutions of great value were established. At one time there was considerable opposition from the mass of the medical profession to the proposed school clinics on the ground that these centres would be thrust between the medical practitioner and his patient without any actual need. Compromises were effected and the clinics are now the means of very valuable work being carried out, which would be left undone save for the facilities provided in them. In rapid succession special schools for peculiar types of children were created, as the need was demonstrated by the medical officers. There are schools for the blind, for the deaf and dumb, for myopic children, for the crippled, for mentally defective children and for epileptics. Open-air schools include 25 day establishments and 17 residential schools. School hygiene embraces physical education, organization of play, camping clubs, the teaching of sex hygiene and physiology and the provision of meals for the underfed.

In Australia the school hygiene movement has not yet reached so advanced a stage. During the war some progress was registered in New South Wales, but in the other five States the services stagnated or actually retrogressed. In Victoria, South Australia and Western Australia the Governments have exhibited parsimony and have failed to provide sufficient money to meet a tithe of the expenses.

The duties of the school medical officer include the inspection of school children, more particularly for defects of vision and hearing, for defects of the throat and nose, for defects of the teeth, for hernia, for anæmia, malnutrition, skin affection and skeletal deformities and postural defects. Incidentally the school medical officer is required to recognize and report on less common conditions, such as congenital heart defects, tuberculosis in children, affections of the nervous system and disturbances of the hæmapoietic system. The inspection work resembles to some extent that required for life insurance examination. The school medical officer has opportunities for sharpening his skill in diagnosis and in acquiring special knowledge in the handling of children. He has to possess a sound knowledge of the hygiene of the school building and of the requirements of children in regard to rest, relaxation and play. He has almost unique opportunities for studying the mental "make-up" of children and for observing the effect of faulty environment of the home. Lectures have to be delivered to parents and the teaching capabilities of the medical officer are put to practical use in the training of school teachers in general hygiene. Professional attendance is given in some States by the school medical officer to the trainees at the teachers' colleges and high schools. The administrative side of the work is not very arduous, but requires application and accuracy. There is a tendency in all the services to require the school medical officers to rush the work of inspection. Instead of limiting the number of children to be examined in one hour to four, five, or six at the outside, many officers train themselves at the instigation of the department to complete from 45 to 50 inspections in a single day. The hours of work in the schools are necessarily limited, but there is scope for the keen medical officer to interest himself in the numerous problems awaiting solution and to undertake research work of a highly interesting kind. Fresh fields of activity are being opened and there is evidence of considerable development in each of the States in the near future. The task is especially suited to women practitioners, whose aptitude for this form of work has long been recognized. We do not regard the school medical service as a good opening for the practitioner who is not prepared to devote his life to children. Many men and women take the work for a year or two and when they are becoming proficient, they give it up. Success depends on knowledge of pædiatrics, of ophthalmic, aural and nasal work, of epidemiology and of the general principles of medicine. The successful medical officer must be tactful and sincere.

The remuneration offered is not high, but it must be remembered that the expenses of the school medical officer are less than those of the general practitioner. From the accompanying table will be seen the number of medical officers employed in the six States and the remuneration paid. The medical officer has no night work, does not have to provide a *locum tenens* when he goes on holiday, receives a regular annual holiday, can live in an inexpensive house and does not require to keep a car or to employ a nurse and when he is sent into the country on professional duties, he receives

School Medical Services in Australia.

State.	Population in Millions.	School Medical Officers. Whole Time.	Part Time.	Salaries.	Vote. Total. £	Per Child.	Average Attendance.	Children Examined.	Number Examined.	Schools Controlled.
New South Wales	2	(13) 10	—	450-900	16,000[1]	1/5	225,000	30%	68,000	All schools
Victoria	1⅘	(4) 2	—	444-600	1,500	-/2	185,000	4%	7,000	All high schools; partial primary
Queensland	¾	(3) —	13	350-450-600	7,000[1]	1/2½	115,000	16½%	18,000 14,000 Dental	Partial
South Australia	½	(2) 1	—	500-	1,200	-/4½	60,000	5¾%	4,000	Partial
Western Australia	⅓	1	?	408-528	750	-/4	43,000	11%	4,800	Partial
Tasmania	⅙	2	2	500-	2,900[2]	1/11	30,000	36%	11,000	All schools

[1] Includes dental and oculist work.
[2] Includes dental Treatment.
Authorized staff in parentheses.

living expenses as well as travelling expenses. A general practitioner earning £1,500 a year has to deduct £300 for bad debts, £200 for his chauffeur and keep, £170 for his nurse and her keep and £150 for the upkeep of his car, running expenses, etc.. The total deductions amount to £900, leaving him £600 to live on. The school medical officer with a salary of £600 is not less well off.

THE LUNACY SERVICE.

The certified insane in Australia number approximately 21,000. This means that provision for institutional treatment has to be made for about four persons in every thousand members of the community. The day has long gone by when the insane were incarcerated in asylums without any effort being made to secure their recovery. The modern mental hospital is based on the principles of curative medicine. This involves the special training of a relatively large number of medical practitioners in psychiatry and their employment by the State for the purpose of giving skilled attendance to the patients who are detained under certificate or as voluntary boarders in the hospitals. The medical student has hitherto not had many facilities to equip himself for this form of medical practice. He therefore enters the lunacy service with but little special qualification for the work to be undertaken. Within the hospitals he finds ample opportunity to acquire knowledge and skill and to render himself efficient as a psychiatric specialist. The service has many attractions for the man aiming at achievement. The field of study is wide and the areas still unexplored are extensive. There is, it is true, a temptation for the average man to lose enthusiasm and to perform his tasks in a mechanical manner, when he discovers that his promotion depends more on length of service than on activity or enterprise. On the other hand, the man with the real spirit of research is unlikely to fall a victim to slovenly methods when so much remains to be done.

In New South Wales there are nine mental hospitals, the largest accommodating between 1,200 and 1,300 patients. In Victoria there are eight hospitals for the insane and one institution for imbecile children. The largest of these institutions accommodates approximately 1,000 patients. In Queensland there are three hospitals for the insane, one of which is a large institution accommodating about 1,400 patients, the second is capable of holding close on 800 patients, while in the third there are beds for about 330. In South Australia there is but one hospital for the insane. The number of patients under treatment exceeds 1,400. Quite recently a special institution has been established for the care of imbecile children. In Western Australia there is one institution accommodating over one thousand patients, and in Tasmania there is one institution with about 600 beds. In addition to these public hospitals there are a few private institutions managed by medical practitioners who have previously gained experience in the treatment of mental disease in the public hospitals for the insane.

In New South Wales, in Victoria, in Queensland and in Western Australia the medical service is under the control of an Inspector-General of the Insane, who is an expert in this special branch of practice and necessarily a skilled organiser. The medical staff of the mental hospital varies but little in the several States. In each case there is a Medical Superintendent, one or more senior medical officers and one or more junior medical officers, according to the size of the institution. In Queensland the Medical Superintendent of the largest mental hospital (Goodna) holds the position of Inspector of Hospitals for the Insane. In Western Australia the Inspector-General of Insane resides at the Claremont Hospital for the Insane.

In New South Wales the salaries of the medical officers are now being revised. The amounts to be attained and the rate of progression between the minima and the maxima will be increased. In Victoria a revised scale of salaries has also been submitted and will, it is understood, shortly be introduced. The salaries will be brought more or less into line with those of New South Wales. As a rule the Medical Superintendent receives in addition to the salary set out below, unfurnished quarters, light, laundry and other allowances. The senior medical officers receive quarters, at times furnished, at times partly furnished, with light and laundry. Similar allowances with service added are usually received by the junior medical officers.

The following are the rates of salary in the several States:—

Officer.	New South Wales.	Victoria.	Queensland.	South Australia.	West Australia.	Tasmania.
Inspector-General	£1,000	£1,500	£1,000[1]	——	£804, with house and allowances	——
Medical Superintendent	£700 to £800, with allowances valued at £124 per annum	£700 to £800, with allowances	£700, with allowances valued at £120 £600, with allowances valued at £90	£700, with house, light and part rations	£708, with house and allowances	£657, with allowances, house, fuel and light, valued at £93
Senior Medical Officer	£550, with allowances valued at £85 per annum	£396 to £446, with unfurnished house and allowances	£450 and £500, with allowances valued at £90.	——	£408 to £528, with board and allowances	——
Junior Medical Officer	£300 to £500, with allowances valued at £99 per annum	£312 to £372, with furnished quarters and allowances	£260 and £450, with allowances valued at £90	——	£320, with board and quarters	——

[1] The Inspector of Hospitals for the Insane holds the position of Medical Superintendent of the Goodna Hospital and receives for both offices £1,000 and allowances valued at £140 per annum.

In New South Wales and in Victoria a whole-time Pathologist is employed. He has the grading of a senior medical officer.

THE NAVAL AND MILITARY MEDICAL SERVICES.

The medical profession of Australia has created for itself a reputation for efficiency in action during the course of the Great War. This reputation has been based on voluntary service, determination and efficiency. Before the war only a few enthusiasts found time and had inclination to join the naval and military organizations of the Commonwealth. Although the profession rose immediately to the emergency, it would be short-sighted to allow its members to lapse into the same condition of unpreparedness. The medical service of the Royal Australian Navy has been reorganized, while that of the Australian Military Forces is in the process of recasting. We have endeavoured in the following paragraphs to summarize the conditions of service. In the future the medical officer in the Navy or the Army will have himself to blame if he does not find the work congenial, or if he does not fulfil important functions and establish himself as a useful and efficient practitioner.

Royal Australian Naval Medical Service.

The Royal Australian Naval Medical Service contains permanent officers, officers for temporary service and emergency officers. For the permanent service the candidate must be not less than 21 nor more than 28 years of age. He must be the son of a natural born British subject. He must be registered or entitled to be registered in one of the States of

Australia. He will be required to signify his readiness to engage in general service at home or abroad. No one suffering from any constitutional or mental disability is accepted for the service. The candidate is required to submit himself for competitive examinations to an examining board appointed by the Naval Board on the recommendation of the Universities of Sydney, Melbourne and Adelaide. No candidate is permitted to sit more than twice for this examination.

On entry to the service the candidate receives the rank of surgeon, but remains a probationery officer for a period of 12 months. His seniority, however, dates from the time of probationery appointment. At times, a probationery officer is permitted to hold an appointment as medical or surgical officer at a recognized civil hospital. In these circumstances he receives no naval pay while actually employed in the civil hospital, but all other privileges are granted. As a rule, the young naval surgeon is appointed to one of his Majesty's Australian depôts or to a ship which has a senior medical officer. In either case the junior officer has the advantage of tuition and, to a certain extent, shared responsibility. At the end of 12 months the surgeon is promoted to the permanent service and is required to discharge his duites in shore establishments, harbour ships and sea-going ships in rotation, as far as the exigencies of the service permit. At the end of eight years the officer is promoted to the rank of staff surgeon, after having passed a qualifying examination. For promotion the surgeon must have spent three years at sea and have been recommended for advancement by the Director of Naval Medical Services. Promotion may, however, be effected at an earlier date for distinguished service or for conspicuous professional merit. Special competence displayed at the qualifying examination will be taken into consideration when the officer is recommended for accelerated promotion.

Under ordinary conditions a staff surgeon, on attaining eight years' seniority in this rank, is promoted to the rank of fleet surgeon. The conditions for promotion are that he shall have served as a staff surgeon for three years at sea, he shall be recommended for promition by the Director of Naval Medical Services, and that he shall not have declined service, except for reasons which were acceptable to the Naval Board. Accelerated promotion is granted under rare conditions for distinguished service or conspicuous professional merit.

Courses of hospital study are arranged for surgeons prior to the staff surgeons' examination, for senior medical officers after 14 years' service and for any medical officer who may be required to take up some special work. The cost of these courses of study is borne by the service.

The medical officers are entitled to annual leave. In addition leave on half pay for 12 months or on full pay for six months may be granted to any medical officer who has served in the permanent sea-going forces for 20 years. Furlough varying from one month to five months may be granted to officers on reaching the prescribed age for retirement, according to the length of service.

The rate of pay is on a sliding scale. The surgeon, on joining the service, receives £365 a year active pay and £91 5s. deferred pay, making a total of £456 5s.. The rate is increased each two years. At the end of eight years, on promotion to the rank of staff surgeon, he receives £456 5s. active pay and £118 12s. 6d. deferred pay, making a total of £574 17s. 6d.. On promotion to the rank of fleet surgeon after a further eight years, he receives £602 5s. active pay and £146 deferred pay, or a total of £748 5s.. After ten years' service as fleet surgeon his total pay amounts to £949. The deferred pay is held until the retirement or resignation of the officer. In certain cases the Naval Board may pay the amount of deferred pay to the officer, provided that he has completed seven years' service. Deferred pay is forfeited when an officer is dismissed from the navy for misconduct. It will thus be seen that if the officer joins at the age of 24 and retires as a fleet surgeon at the age of 52 years, he draws the sum of £1,250 as deferred pay.

The additional emoluments include medical attendance, uniform allowance at the rate of 1s. *per diem* (£40 is paid as a gratuity on joining and the allowance starts at the end of 12 months), rations, lodging allowance for officers not provided with quarters, married allowance, charge pay in naval hospitals and hospital ships, flag allowance for senior medical officers of the flag ship, administrative allowance to the Director of Naval Medical Services and to his assistant, and allowance in hospital in lieu of servants.

Temporary medical officers are appointed in time of war or of other emergency. They are paid at the rate of 25s. per day, and receive a uniform allowance of £25. They are liable for six months' service or for service during the currency of a war and six months after its termination. They take the rank of surgeon, but are graded after the surgeons of the permanent service.

Permanent or temporary surgeons are recommended to enrol their names on the emergency list of medical officers. The special conditions attaching to this service have been published, together with the full regulations of the service, in *The Medical Journal of Australia* of August 31, 1918.

Army Medical Services.

At the present moment the organization of the Australian Army Medical Corps in the Australian Imperial Force is approaching dissolution. The medical officers who served overseas, are rapidly returning to their civil occupations. Some of these officers are being transferred to the Australian Military Forces, while others are leaving the service. Under the present conditions the Australian Military Forces embrace an Australian Army Medical Corps and an Australian Army Medical Corps Reserve. The medical service is being reorganized with a view to a more satisfactory establishment for peace time and suitable preparedness for the event of war. As soon as the conditions of the reconstituted Army medical service have been determined and sanctioned, the details will be published in these columns. We would impress upon those who select medicine as a calling, the necessity of devoting some time to the services of the Empire. Every man who joins the Army Medical Corps or the Reserve is assisting in the building up of a secure foundation of Empire, and insuring the people of the Commonwealth against the risk of interference by foreign powers.

We would also add one word to the prospective student of medicine—join the Royal Naval League!

MEDICAL STUDENTS' SOCIETIES.

A society of medical students exists in connexion with each of the Medical Schools. While students are not compelled to join these organizations, it is both to their interests and to that of the school that every medical undergraduate should join. From the point of view of the student there are social advantages that must be obvious to everyone. No undergraduate can afford to live his university life careless of the opinions of his comrades. Popularity is a valuable asset in all walks of life, but in none more than in the university. What student can aspire to popularity unless he is actively concerned in the pastimes, the recreations and the institutions of the students? In the next place these medical students' societies are excellent training grounds for debate. It is very seldom that the gift of ready reply and of rational criticism is developed late in life. The most accomplished speakers and debaters are those who have seized opportunities at an early age. Lastly, the student derives personal benefit from membership of the medical students' societies. From the point of view of the school it goes without saying that the institution of a social and debating club tends to raise the reputation of the school and to foster a spirit of pride in doing things well. Under the surface veneer of light-heartedness and satire, there is a deep-seated desire to achieve something worth doing in these societies. The late Professor Sir Thomas Anderson Stuart recognized better than anyone else how valuable a society of this kind was to a medical school when he founded one in Edinburgh and later one in Sydney.

The Sydney University Medical Society was founded in 1886 by Thomas Anderson Stuart. Sixteen students joined on foundation. The objects of the Society, as set out in the Rules, were to provide a common meeting ground for teachers, graduates and undergraduates, to further the interests of the Medical School and to develope scientific knowledge and general culture. The subscription at first was 2s. 6d. a year. In the year 1892 the subscription was reduced to 1s. 6d. to satisfy the cautiousness of a strong Scottish element. In the year 1894 there were 55 members and the club was pursuing a successful career. In the following year the Society undertook the publication of a supplement to *Hermes*, the journal of the undergraduates of the University. In 1896 the subscription was

restored to its original level. Nine year later, in 1904, the *Sydney University Medical Journal* appeared as a separate publication and soon enjoyed considerable popularity for its frank caricatures and for its witty, if at times somewhat *risqué*, articles. The journal appeared once a year up to 1913, when a number was published each university term. It is an excellent production and reveals competence on the part of those responsible for its publication and ability on the part of those who contribute to its pages.

All graduates and medical undergraduates of the Sydney University are eligible for membership. In addition, membership is open to any medical practitioner whose registered qualifications are recognized by the University of Sydney. The Professors of the Faculty of Medicine are *ipso facto* honorary members. For graduates the subscription as life members is one guinea. This does not entitle the member to a free copy of the *Journal*. The subscription to the *Journal* for life members is one guinea for four years. Senior undergraduate members pay an annual subscription of seven shillings and sixpence, which entitles them to receive the three copies of the *Journal*, and junior undergraduates pay five shillings.

The Society holds about twelve meetings each year. One of these meetings is devoted to clinical demonstrations by undergraduates and to debates on the subjects of the demonstrations. Papers by graduates, members of the teaching staff, medical practitioners recognized as authorities in special subjects and undergraduates are read at the other meetings. The debates are often spirited and of distinct didactic value.

The Medical Students' Society of the University of Melbourne is a very active and energetic body. It was founded "to foster a more cordial understanding and a closer relationship between medical students and to advance their knowledge and further their interests generally." Any matriculated medical student of the Melbourne University is eligible for membership. The subscription is five shillings a year. According to the Rules, when a member fails to pay his subscription on or before 30 days after the annual meeting, he "shall be refused the ordinary privileges of members of the Society." In practice, however, the Treasurer's life is not an easy one and he usually exhibits mercy. We realize that medical students frequently have difficulty in scraping together the modest amount of the annual subscription, but this should not be offered as an excuse for the non-payment of the sum, more especially since they receive more than an equivalent in the privileges. In the first place there is the *Speculum*, the rival of the Journal of the Sydney University Medical Society, and a very formidable rival it is. It appears three times a year and every issue is sparkling, entertaining and full of instructive material. We look forward to this production with undisguised anticipation of pleasure. The second privilege of membership is the right to attend the fortnightly meetings (during term time) of the Society. At these meetings papers of undoubted value to the students are read and excellent debates take place. The Society has arranged with the Women's Hospital for a voluntary course of obstetrics in the out-door department, so that the students may have the advantage of attending women during their confinements under conditions approximating those of private practice. The Society has obtained permission from the authorities to allot groups of students for work in special hospitals. This means that the members of the Society have distinct advantages over other students in regard to special clinical work. The members have further the privilege of the use of certain libraries. At present there are 658 undergraduates enjoying the benefits of membership.

Any member of the Society or qualified medical practitioner who pays the sum of five guineas to the Society, may be enrolled a life governor by the vote of the members at an annual meeting. The affairs of the Society are entrusted to a committee consisting of the Honorary Secretary, the Honorary Assistant Secretary, the Treasurer and the Assistant Treasurer, the Editor of the *Speculum*, three representatives of the students in the fifth year and two representatives each of the first, second, third and fourth year students. The President and the Vice-Presidents must be members of the Victorian Branch of the British Medical Association.

The Adelaide Medical Students' Society was formed in 1889. The original members numbered 24. A constitution was drawn up with considerable care and was incorporated with the rules. The objects of the Society, as defined in the rules, are "to further the interests of medical work among students and to promote intercourse among its members." The members of the Society are elected from the medical undergraduates of the University of Adelaide and from graduates of this or any other university. Undergraduates pay an annual subscription of ten shillings, while graduates are liable for only five shillings. The payment of three guineas secures life membership for any eligible person. Meetings are held once a month from April to September. The annual meeting is held in March of each year. The average attendance at the monthly meetings is 56.

The Society publishes a journal called the *Adelaide Medical Students' Review*. This publication appears at least twice a year. It is a splendid little journal and, as has been pointed out in these columns a short time ago, the Editor and his Assistant Editor, as well as the Business Editor, have reason to be proud of the results of their efforts. The *Review* has a character of its own and serves an excellent purpose in offering the students instruction presented in a most acceptable dressing and in giving them information concerning the doings of past and present members of the Society. The first number was published in 1890.

The Adelaide Medical Students' Society is justly proud of its record. At present there are 94 members. This number will increase materially within the next few years. No less than 139 past and present members of the Society enlisted for active service with the Australian Army Medical Corps. The number of those who were decorated for conspicuous bravery and devotion to duty, is 30. Seven past members of the Society gave their lives for the Empire.

Each year the Society holds a dinner to which the professors and lecturers of the University and the members of the honorary staff of the Adelaide Hospital are invited. These dinners foster an excellent spirit between the hosts and their guests and between the hosts themselves.

The undermentioned have been elected as members of the New South Wales Branch of the British Medical Association:

H. H. Crowe, Esq., M.B., Ch.M., 1918 (Univ. Sydney), Burda Park, May's Hill, Parramatta.

D. J. Glissan, Esq., M.B., 1911 (Univ. Sydney), No. 2 Gloucester Flats, Forbes Street, Darlinghurst.

J. G. M. Beale, Esq., M.B., 1916, Ch.M., 1918 (Univ. Sydney), 85 Greenhill Street, Croydon.

T. S. Greenaway, Esq., M.R.C.S. (Eng.), L.R.C.P. (Lond.), 1916, c/o. Union Bank of Australia, Melbourne.

G. Middleton, Esq., M.B., 1919 (Univ. Sydney), Sydney Hospital.

C. Bluett, Esq., M.R.C.S. (Eng.), 1919; L.R.C.P. (Lond.), 1919; L.M.S.S.A. (Lond.), 1914, Alstonville, Richmond River.

W. H. W. Cheyne, Esq., M.R.C.S. (Eng.), L.R.C.P. (Lond.), 1913; Bank of Australasia, Pitt Street, Sydney.

A. Braccer, Esq., M.D., 1900 (Univ. Parma), c/o. Messrs. Richard Thomson & Co., 15 Castlereagh Street, Sydney.

Miss Ethel Byrne, M.B., Ch.M., 1918 (Univ. Sydney), Newcastle Hospital, Newcastle.

Mrs. Enid Robertson, M.B., 1919 (Univ. Sydney), 185 Military Road, Neutral Bay.

The undermentioned have been nominated for election as members of the New South Wales Branch:—

Leonard May, Esq., M.B., 1914, Ch.M., 1919 (Univ. Sydney), F.R.C.S. (Edin.), 1919, 152 Pittwater Road, Manly.

Reeve Palmerston Rundle, Esq., M.B., Ch.B., 1917 (Univ. Melb.), Berowra.

BABY WEEK, SYDNEY.

The President of the Baby Week Campaign, Sydney, wishes to notify the members of the New South Wales Branch of the British Medical Association that they and their wives will be admitted to the Town Hall, Sydney, at the official opening of the Baby Week Exhibition on March 30, 1920, on presentation of their personal visiting cards. He expressed the hope that the members will avail themselves of this invitation.